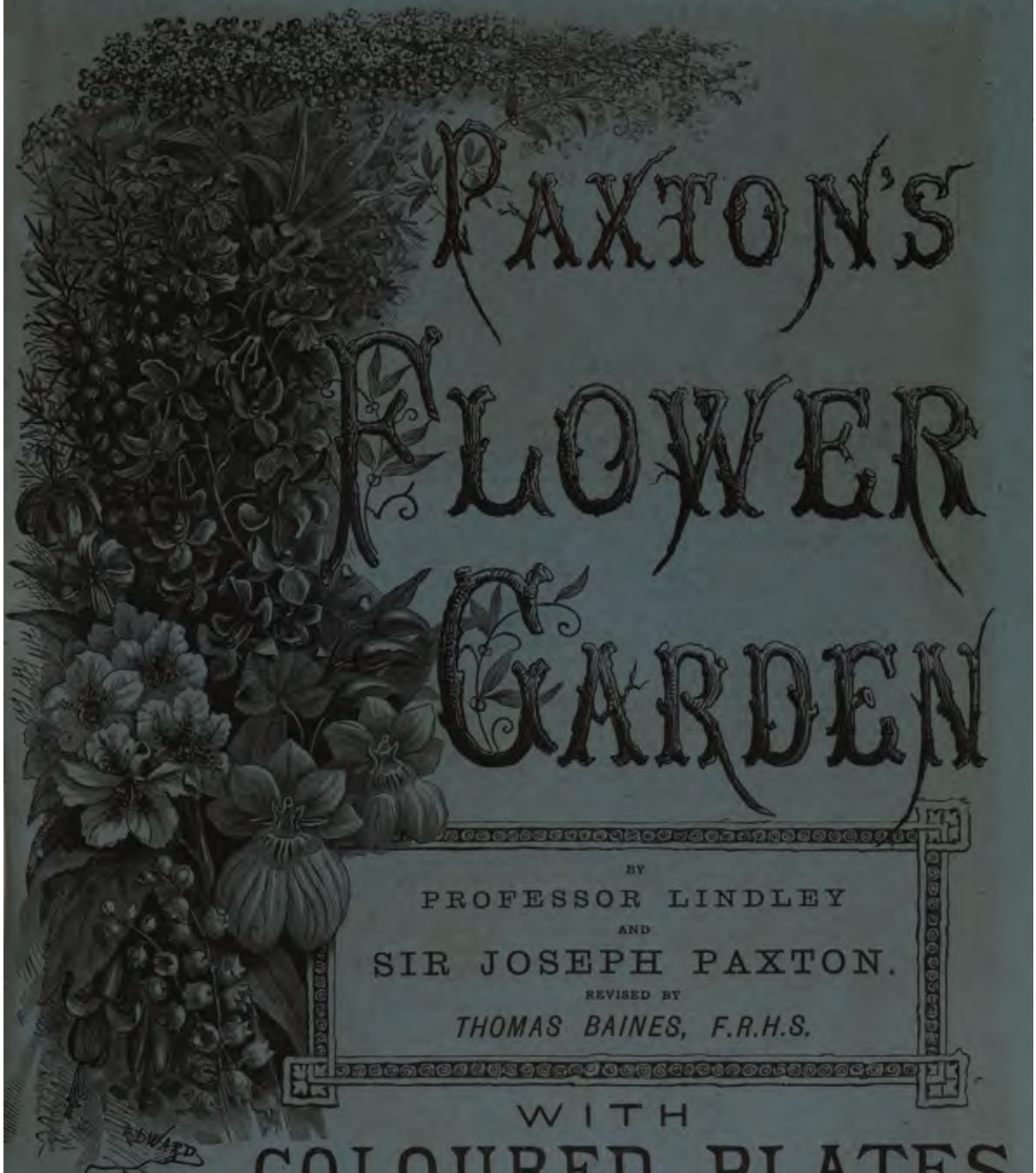
PART 37. [To be completed in about 54 Parts.] PRICE ONE SHILLING.



PAXTON'S FLOWER GARDEN

BY

PROFESSOR LINDLEY

AND

SIR JOSEPH PAXTON.

REVISED BY

THOMAS BAINES, F.R.H.S.

WITH

COLOURED PLATES

CASSELL & COMPANY, LIMITED:

LONDON, PARIS & NEW YORK.

PAXTON'S FLOWER GARDEN.

PAXTON'S

FLOWER GARDEN.

BY

PROFESSOR LINDLEY

AND

SIR JOSEPH PAXTON.

REVISED BY

THOMAS BAINES F.R.H.S.

WITH COLOURED PLATES.

VOL. III.

CASSELL & COMPANY, LIMITED:

LONDON, PARIS & NEW YORK.

1884.


BODLEIAN
OXFORD

THE SWEETEST AIR-PLANT.
(AËRIDES SUAVISSIMUM.)

[PLATE 73.]

THE SWEETEST AIR-PLANT.

(AERIDES SUAVISSIMUM.)

A Hothouse Epiphyte, from MALACCA, *belonging to the Natural Order of* ORCHIDS.

Specific Character.

THE SWEETEST AIR-PLANT.—Raceme horizontal, oblong, many-flowered. Bracts dwarf, ovate, scarious. Sepals and petals oval, blunt, very much spreading. Lip horned, ascending, pressed to the column, three-lobed; its lateral divisions oblong, somewhat toothed, the intermediate one dwarf, linear, bifid, quite entire.

Aerides suavissimum: *Lindley in Journ. Hort. Soc.*, vol. iv., p. 264. A. flavidum: *supra*, vol. ii., p. 126, a variety.

THIS plant was introduced from the Straits of Malacca by Messrs. Loddiges, with whom it first produced its flowers in June, 1849. At that time it was described as being in general appearance similar to *A. odoratum*, but in fragrance more balsamic and delicious. The sepals and petals were white, with a lilac lip; the lip was pale nankeen colour, with a lilac streak along the centre of the middle lobe. It was said to differ from *A. odoratum* in the middle lobe of its lip being emarginate and much longer than the laterals, which are distinctly notched; and from *A. Quinquevulnera* in its not being at all serrated, as well as in its greater length.

Since that time we have had much finer specimens for examination from Mr. C. B. Warner, two of which are now figured, and we find that the flowers acquire a very distinct

blush, instead of the paleness which was first described; the point of the spur is also a warm red, and the lip itself is a pale lemon-colour.

The great feature of this species is the small bifid middle lobe of the lip, which is sometimes longer than the lateral toothletted lobes, and sometimes much shorter, while the lateral lobes are quite entire. The latter form was called by us *A. flavidum* at page 126 of our second volume; the flowers were found to be glutinous and very fragrant; and of the lip the horn was green, the lobes pale yellow, the petals and sepals white dashed with pink.

At Plate 67 we gave some account of the species of Aërides, which constitute the first section of this genus, characterised by having a flat undivided lip, with an ear perhaps at the base. We now publish a continuation of that account.

AERIDES §. *Labello trilobo; laciniâ intermediâ majore, v. lateralibus æquali.*

5. A. crispum *Lindl. in Wall. Cat.*, no. 7319; *Gen. and Sp. Orch.*, no. 6; *Bot. Reg.*, 1842, t. 55; A. Brookei *Bateman in Bot. Reg.*, 1841, misc. 116; foliis planis apice obtusis obliquis bilobis racemis multifloris nutantibus duplò brevioribus, sepalis petalisque subæqualibus obtusis, labelli maximi laciniâ intermediâ multò majore ovatâ retusâ serrulatâ basi bidentatâ lateralibus erectis acutis nanis, calcare cornuto incurvo.—*Peninsula of India.*—This charming species, in the magnitude of its blossoms, surpasses any other kind, the lip alone being upwards of an inch long, beautifully tipped with rose-colour. The other parts of the flower are of brilliant white. In the form of the labellum the species slightly resembles *Aërides affine.* In its habit it is stiff and erect, the leaves being only five inches long, while the racemes are more than double that length.

6. A. falcatum *sp. nov.;* foliis coriaceis distichis obtusis apice obliquis mucronatis, racemis densis pendulis multifloris, labelli tripartiti laciniis lateralibus falcatis obtusis intermediâ obovatâ fissâ ciliatâ convexâ basi bicristatâ multò angustioribus et brevioribus, calcare brevi cum labello parallelo.—*East Indies.*—A very striking species, exhibited by Sir George Larpent at the June Garden Meeting of the Horticultural Society in 1847. The habit of the plant is that of *A. crispum;* the sepals and petals are white with a crimson speck at the point; the lip is crimson in the middle white barred with rose at the edge, and on the lateral lobes.

7. A. cylindricum *Lindl. in Wall. Cat.*, no. 7317; *Wight's Figures*, t. 1744; ? Epidendrum subulatum *Retz. Obs.*, 6. 50; ? Limodorum subulatum *Willd. Sp., pl.* 4, 126; foliis teretibus, racemis brevibus subbifloris, sepalis ovatis obtusis, petalis oblongis latioribus, labelli cucullati infundibularis laciniis lateralibus oblongis obtusis intermediæ carnosæ ovatæ obtusæ adnatis, calcare recto conico.—*Iyamally Hills, Coimbatore.*—"Leaves round, somewhat cylindrical. Racemes short, about two-flowered. Sepals ovate, obtuse. Petals oblong, broader. Lip cucullate, funnel-shaped; lateral lobes oblong, obtuse; adnate to the ovate, obtuse, fleshy, middle one. Spur straight, conical. Flowers white, or slightly tinged with red, lip reddish; middle lobe yellow at the base." (*Wight.*)

8. A. testaceum *Lindl. Gen. and Sp.*, no. 2; foliis loratis acutis bilobis inter lobos cuspidatis, racemis strictis simplicibus multifloris foliis longioribus, sepalis petalisque obovato-oblongis obtusis, labelli infundibularis laciniis lateralibus erectis obtusis intermediâ lineari patente apice dilatatâ reniformi bilobâ dentatâ lineis duabus elevatis callosis in disco, calcare conico incurvo.—*Ceylon, on trees.*—Peduncles spotted. Flowers the size of *A. Wightianum*, pale yellow, with a violet spot in the middle of the lip. Capsules clavate, six-angled.

9. A. Wightianum *Lindl. in Wall. Cat.*, no. 7320; *Wight's Figures*, t. 1669, under the name of *Vanda parviflora;* foliis loratis apice obliquis obtusis bilobis inter lobos cuspidatis, racemis strictis simplicibus multifloris foliis longioribus, sepalis petalisque ovalibus anticis majoribus, labelli infundibularis laciniis lateralibus pedi columnæ adnatis obtusis intermediâ subcuneatâ apice trilobâ rotundatâ: disco lineis pluribus elevatis crispis cristato, calcare brevi conico.—*Iyamally Hills, Coimbatore.*—"Leaves strap-shaped, oblique at the base, obtuse, two-lobed, with a tooth between. Racemes straight, simple, many-flowered, longer than the leaves. Sepals and petals oval, the anterior ones larger. Lip funnel-shaped, lateral lobes adnate to the foot of the column, the middle one sub-cuneate, roundish, three-lobed at the apex; disk crested, with several elevated crisp lines. Spur short, conical. Middle lobe of the lip deep lilac. Capsules club-shaped, six-angled. Flowers yellow." (*Wight.*)

AERIDES §. *Labello trilobo; laciniâ intermediâ multò minore (nanâ).*

10. A. odoratum *Lour. Fl. Cochinch.* 525; *R. Brown in Hort. Kew.* 5. 212; A. cornutum *Roxb. Mss. Bot. Reg.* t. 1485; foliis flaccidis apice obtusis obliquis, racemis pendulis multifloris foliis longioribus, labelli cucullati infundibularis laciniis lateralibus erectis cuneatis rotundatis intermediâ ovatâ acutâ inflexâ, calcare conico incurvo.—*Common in the hottest parts of India; also in China and Cochin China.*—Flowers white, pink at the point, fleshy, very sweet-scented.

11. A. suavissimum (*alias* A. flavidum) *of this article.*

12. A. Quinquevulnera *Lindl., Sertum Orchidaceum*, t. xxx.; foliis ligulatis apice rotundatis obliquè emarginatis apiculo interjecto, racemis pendulis multifloris foliis longioribus, labelli cucullati infundibularis laciniis lateralibus erectis intermediâ oblongâ inflexâ denticulatâ, calcare conico incurvo.—*Philippines.*—Flowers slightly fragrant, speckled on white, with a purple stain at the end of each of its five divisions.

13. A. virens *Lindley in Botanical Register*, 1843, misc. 48, 1844, t. 41; foliis latis obliquè retusis, racemis pendulis multifloris, sepalis petalisque obovatis obtusis, labelli cornu acuminato ascendente lobis lateralibus apice denticulatis intermedio lanceolato medio canaliculato versus apicem denticulato.—*Java.*—"A beautiful species belonging to that set of Aerides of which *A. odoratum* was the first discovered. Like the flowers of that species, these are deliciously and very peculiarly sweet-scented, and not at all inferior in size. Each sepal and petal has a deep purple blotch at the end, while the remainder is a delicate soft French white. The lip is speckled with crimson, and bears in the middle an inflated, sanguine, serrated tongue. The leaves are much alike in all these plants, but here they are of a peculiarly bright green, which circumstance has suggested the name." According to Blume, his *A. suaveolens* (*Rumphia* III., t. 193, f. 1.) is this species; but its small rose-coloured flowers are not such as we see in this country.

14. A. pallidum *Lindley, Gen. and Spec. Orch.*, no. 18; *Blume, Rumphia* III., t. 197., f. A. Dendrocolla pallida *Blume, Bijdragen* 290; "foliis carnosis rigidis canaliculatis oblique emarginatis inter lobos mucronatis, racemis ascendentibus foliis longioribus multifloris, perigonii phyllis obovato-oblongis obtusis, labelli cucullati lobis lateralibus retusis intermedio cuneato subtrilobo crispo calcari conico incurvo.—(*Blume.*)"—*Timor, on trees;* also *Philippines* (Cuming.)—Flowers showy, white. Lip with transverse pale rose-coloured bars. Spur yellowish at the tip. Flowers very sweet, like Lily of the Valley.

SPECIES TO BE EXCLUDED FROM THE GENUS.

A. tessellatum *Wight in Wall. Cat.*, no. 7318. Epidendrum tessellatum *Roxb. Corom.* 1, t. 42. Cymbidium tessellatum *Swartz. Nov. Act. Ups.* 6. 75; *Willd. Sp. Pl.* 4. 102.—This is a doubtful plant. The specimens distributed by Dr. Wallich consisted of loose flowers of *Vanda Roxburghii*, and the leaves of some plant unknown.

A. appendiculatum *Wallich Cat.*, no. 7315.
A. tæniale *Lindl. Gen. and Spec.*, no. 7.
A. difforme *Wallich, Sertum Orch., fronte* f. 7.

} probably represent so many genera.

A. amplexicaule, and others, forming Blume's genus *DENDROCOLLA*, are plants concerning many of which we have at present no information. With them must be associated the *Liparis? Prionotes* of the *Gen. and Species of Orchidaceous plants.*

[PLATE 74.]

THE LONG-FLOWERED CENTRANTH.

(CENTRANTHUS MACROSIPHON.)

A Hardy Annual, from the SOUTH OF SPAIN, *belonging to the Natural Order of* VALERIANWORTS.

Specific Character.

THE LONG-FLOWERED CENTRANTH.—A smooth annual. Stem erect, dwarf, branched, stout, fistular, glaucous. Leaves ovate; the lower short-stalked, entire, or obscurely toothed, obtuse; the upper sessile, sharply toothed, more or less deeply cut at the base, with linear lobes. Panicles dichotomously corymbose, compact. Bracts narrow, linear, with a membranous edge. Flowers deep rose-colour. Tube of the corolla three times as long as the fruit; spur thrice as short as the fruit. Pappus with black (?) feathery plumes, united at the base by a membrane.

Centranthus macrosiphon: "*Boissier Diagnos. pl. nov. orient.* III. 57," according to *Walpers' Repertorium*, vi. 80.

ACCORDING to M. Boissier, this grows on damp house-tops (*tecta humida*), in the warmest western part of the kingdom of Granada, near the town of Estepona. This author distinguishes it from *C. Calcitrapa* by its upper leaves being less cut, and only at the base; by its flowers being four times as long, and deep rose-coloured; by its spur being thrice as long; and by the part of the corolla placed between the calyx and base of the spur being extremely short, not, as in *C. Calcitrapa*, half as long as the fruit. According to the specific character given by M. Boissier, it should also have black pappus, of which we see no sign.

It was introduced to this country by the Horticultural Society, who received it from Messrs. Vilmorin, of Paris. We find it to be an excellent autumnal annual, with masses of rich ruby flowers of various tints, giving the heads a sparkling varied appearance, which our colourers are unable to imitate.

GLEANINGS AND ORIGINAL MEMORANDA.

CATTLEYA (LABIATA TRIANÆI) MASSANGEANA. Few of the many divisions to which the glorious *Cattleya labiata* has been subjected—as it has turned out, on insufficient grounds—are more sportive than *C. Trianæ*, the best forms of which are scarcely surpassed by the finest of the genus. By the description, the variety under notice must be one of the most distinct and beautiful. It appears to have flowered with M. D. Massange de Louvrex, of Baillonville, near Marche, Belgium.

The lip has a nearly reniform anterior dark purple blotch, with a white border. Middle line of the disk white, bordered on each side by a long area of light purple, with light purple oblique radiating lines outwardly. Sepals white, with longitudinal purple-mauve streaks. Petals on the longitudinal central space simply purple-mauve with a few narrow white spots, and with oblique purple-mauve linear, sometimes lobed lines extending towards the border. Column white, mauve-purple below.— *Gardener's Chronicle*, N.S., vol. xix., p. 242.

CYPRIPEDIUM SCHRŒDERÆ. In this we have another of Messrs. Veitch's successful hybrids. It is a cross, we understand, between the singularly beautiful species *C. caudatum* and *C. Sedeni*, which is itself a hybrid. Amongst the number of hybrid Cypripediums which have appeared in recent years, this is one of the most distinct.

A fine plant, the flowers of which may be compared with *C. albo-purpureum*, yet far larger. The odd sepal is narrower, nearly ochre-coloured, with purple veins. The lateral sepals form a very broad transverse mass, ochre-coloured, with purple-brown and purple veins, the two purple midribs being very conspicuous. Petals dependent, broad, acute, undulate, with some purple, and a whitish middle area. Lip broad, blunt, purple outside. Inflexed lobes sulphur-yellowish with brown blotches. Anterior limb of sac crenulate. Side horn-like processes very obscure. Leaves as in *C. Sedeni*.—*Gardener's Chronicle*, N.S., vol. xix., p. 432.

EUCHARIS SANDERII. To the well-known *E. amazonica* and the more recently introduced *E. candida*, we have another addition to these beautiful flowers, which, independent of their chaste appearance in a growing state, are amongst the best we possess for arranging in the many ways that flowers are now used. From the short time that has elapsed since the bulbs were brought into the country, it may reasonably be supposed they have not yet acquired the strength they will ultimately attain, with most likely a proportionate increase in the size of the flowers, which so far are not quite so large as those of *E. amazonica*; but this, for most purposes, renders them in no way inferior. Like *E. amazonica* and *E. candida*, it comes from New Granada, and consequently, like them, will require to be grown warm, and treated in other respects similarly. It was imported by Messrs. Sander and Co., of St. Albans, and bloomed at Kew in the autumn of 1882.

Bulbs ovoid, one and a half or two inches in diameter. Leaves two to a scape; petiole four or six inches long, flattened on the face; blade cordate-ovate, cuspidate, eight to ten inches long, five or six inches broad, membranous in texture, quite glabrous, bright green on the face, pale green on the back, with six to ten pairs of arcuate primary veins. Scape terete, about a foot long. Spathe-valves three or four, lanceolate acuminate, green, unequal. Flowers two or three in an umbel, not distinctly scented; pedicels very short; ovary oblong-trigonous, half an inch long in the flowering stage; perianth tube curved, two inches long, tinged with green; limb pure white, about two inches in diameter when expanded; segments ovate, much imbricated. Corona adnate to the upper portion of the perianth tube, except a very narrow free border, furnished with six primrose-yellow vertical stripes; anthers linear. Style protruded from the corolla-tube, thickened and distinctly three-lobed at the stigmatose apex.—*Botanical Magazine*, 6676.

OSMUNDA JAPONICA, VAR. CORYMBIFERA. In this we have another of the crested Ferns which from time to time appear. It is a form of the well-known *O. Japonica*, a fit companion to our native Royal Fern, *O. regalis*, one of the handsomest and most distinct of native species. As a hardy kind it is an important acquisition. It is of Japanese origin, introduced by Messrs. Veitch, through their collector, Mr. Maries.

Fronds ten to twelve inches high, triternate lobes, terminating in a flat spreading tuft of bluntish divaricate segments. Veins free, as in the type, and usually about twice forked. From the seedlings—which, we understand, have been raised in Messrs. Veitch's establishment, it comes true to its crested character from spores.—*Gardener's Chronicle*, N.S., vol. xix., p. 466.

ODONTOGLOSSUM PESCATOREI, VAR. VEITCHII. One of the characteristics common to several of the species of Odontoglots is the variable character of the flowers in individual plants. Amongst the many fine varieties that have appeared of *O. Pescatorei*, this exquisite form puts all others in the shade. It has been figured in "The Orchid Album," but the flower as shown at the first April meeting in 1883 of the Royal Horticultural Society, at South Kensington, by Baron Schroeder's gardener, Mr. Ballantine, was more beautiful than that illustrated in the above work. The individual flowers are large for the species.

The ground-colour of the sepals and petals, which are broad and large, is pure white. A large portion of the base of each is covered with a dense blotch of deep puce, the contrast of the two colours being highly effective. It is undoubtedly one of the finest Orchids introduced for a long time.

PLEUROPETALUM COSTARICENSE. Amongst plants grown for the pretty appearance of their berries, now held in estimation almost as much as those with handsome flowers, this Central American species is a welcome addition. It will no doubt require the warmth of an intermediate house, and not be difficult to manage. The fact of its bearing its fruit in winter is an additional recommendation. The berries are produced in large terminal branches, and individually are about the size of small peas, of a deep red colour, and remain long on the plants. So far as its cultural requirements are concerned, in the matters of soil, water, and heat it will no doubt thrive with the ordinary treatment found to answer for the generality of the cooler section of stove plants.

A small shrub, quite glabrous. Leaves petioled, alternate, four to five inches long, elliptic-lanceolate, acuminate, with the tip often drawn out, dark green above, paler beneath, nerves many oblique; petiole one-half to one inch long. Flowers small, very numerous in terminal and axillary subcorymbose much-branched panicles, shortly pedicelled, bracteate and two-bracteolate; bracts small, at the base of the pedicel; bracteoles minute, ovate, obtuse, connate at the base. Perianth a quarter of an inch in diameter, green at length scarlet; segments five, elliptic-oblong, obtuse, concave, spreading. Stamens five to eight, united at the base; anthers small. Ovary ovoid; ovules very many. Berries size of a pea, globose, blood-red, shiny. Seeds numerous, black.—*Botanical Magazine*, 6674.

THE BLAND AMARYLLIS.
(AMARYLLIS BLANDA.)

[PLATE 75.]

THE BLAND AMARYLLIS.

(AMARYLLIS BLANDA.)

A Stove Bulbous Plant, from the CAPE OF GOOD HOPE, *belonging to the Natural Order of* AMARYLLIDS.

Specific Character.

THE BLAND **AMARYLLIS.**—Flowers horizontal, closely umbelled, with a short tube. In *A. Belladonna* the flowers are somewhat erect and fewer, and there is no tube at all.

Amaryllis blanda: *Ker in Botanical Magazine*, vol. xxxv., t. 1450; *Herbert, Amaryllidaceæ*, p. 277.

FOR the opportunity of figuring this beautiful plant we are indebted to Mrs. Bellenden Ker, in whose collection, at Cheshunt, it flowered. It was bought in a lot marked "Hybrid," at the sale of the plants of the late Dean of Manchester. Kept in a stove, it grew very rapidly, soon going to rest; and suspicion arose that the stove was not the right place for it. But while apparently at rest, it threw up two large flower-stems, loaded with fragrant bloom. The bulb is covered with a pale brown soft skin, composed of multitudes of thin layers filled with cottony threads. The leaves are grass-green, an inch and a quarter broad, with a regularly-rounded point. Twelve or thirteen beautiful large flowers, thin, delicate French white, changing to pink, load the end of the scape, forming an umbel of great sweetness.

There can be no doubt that it is the identical *Amaryllis blanda* figured seventy

years ago in the *Botanical Magazine*, and now almost unknown in cultivation, concerning which the late learned Dean of Manchester makes the following remarks:—

"This beautiful plant was found by Niven, who collected for Mr. Hibbert, and I believe has never since been met with by any collector. I purchased one of the bulbs when Mr. Hibbert disposed of his collection, and Mr. Griffin had another. Mr. Knight, of the King's Road, Chelsea, who had the rest, killed them by planting them in the open ground, which they will not endure in this country, and I believe there are no bulbs of it in Europe but the produce of those two. I lost two by planting them in front of the stove; one died the first winter, the other only lingered till the second. The leaves of this and the following species, when cut by frost or drought at the points, will not continue to grow like those of *Belladonna*. It requires an airy situation in the greenhouse in winter, drought and dry heat in summer, and will then flower magnificently in September. Whatever may have been the growth of its leaves, it will not flower if it is left in a cold situation while dry."

It is very near the well-known *Belladonna Lily*, especially a pallid variety of that species, not rare in gardens; but it is quite different in constitution, and clearly distinguished by its flowers having a very perceptible tube, instead of rising abruptly from the top of the ovary. The flowers are moreover more numerous, more fragrant, and more horizontal. The late Mr. Ker, when he originally published it, observed that it would be superfluous to particularize differences, which a comparison of the figures and descriptions of the two plants would so easily show. "In *Belladonna* the segments of the corolla do not cohere at all beyond their base, but converge in such way as to give the appearance of their so doing; the leaves are of a dark dingy green, scarcely more than half an inch broad, and never attain a length in any way equalling the scape; which circumstances are here mentioned, because they were omitted in our account of that species. *Blanda* is a native of the Cape of Good Hope, where it was gathered by Sir Joseph Banks; was sent to Miller in 1754 by Van Royen from Holland, and flowered in the Chelsea Garden."

THE SHOWY GRAMMATOPHYL.
(GRAMMATOPHYLLUM SPECIOSUM.)

[PLATE 76.]

THE SHOWY GRAMMATOPHYL.

(GRAMMATOPHYLLUM SPECIOSUM.)

A Stove Epiphyte, from the MALAY ARCHIPELAGO, *belonging to the Order of* ORCHIDS.

Specific Character.

THE SHOWY GRAMMATOPHYL.—Caulescent. Leaves in two rows, sword-shaped, nerveless. Scape erect racemose. Flowers coriaceous, as long as their stalks. Sepals and petals obovate, oblong, wavy, obtuse. Middle lobe of the lip velvety, with three smooth ribs reaching higher than the middle, with lines of hairs next the ribs in the bottom.

Grammatophyllum speciosum: *Blume, Bijdragen*, p. 377, tab. xx.; *Lindl. Gen. and Sp. Orch.*, p. 173; *Blume, Rumphia*, vol. iv., p. 47, t. 191; *Museum Botanicum Lugduno-Batavum*, i. 47.

AT last is realised the long-cherished wish to see this in flower. After years of patience, Mr. Loddiges succeeded in persuading it to expand a few blossoms, all of which were in a monstrous state except one. Nevertheless, they enabled our artist to prepare the accompanying figure, which gives some idea of what the plant is; only the flowering scape proceeded from the top instead of the bottom of the stem, whence it arises if in a natural condition.

According to Blume, this noble plant inhabits Java, and other islands of the Indian Archipelago, as well as Cochin China, where it was found at Pulo Dinding on trees by Mr. Finlayson. "The vigour of its growth, and the extraordinary size of its flowers, render

it the Queen of Orchids." The mountaineers of Java call it *Kadaka soosouron*. We have it from the Straits of Malacca, where the late Mr. Griffith found it, with "a scape six feet high, and an inch in diameter at the base."

Dr. Blume says, that, in its wild state, the stems are from two to three feet high, straightish, cylindrical, from an inch to an inch and half in diameter, covered at the base with rudimentary leaves only, but towards the top closely loaded with foliage. The perfect leaves are in two rows, equitant at the base, very much spreading or curved backwards, from one to two feet long and an inch wide, striated, shining, smooth, with a central rib channelled on the upper side, and bluntly protuberant on the lower. The flowering stem, or scape, springs directly from the base of the leaf-stem, is from five to six feet high, and bears a profusion of blossoms for about half its length. Each flower stands upon a curved stalk, about three inches long, and has the same or a greater diameter; in texture it is between fleshy and leathery; outside it is pale lemon-colour, inside a brighter yellow, marked with numerous roundish brown spots, arranged with much irregularity; all the parts are somewhat oblong, a little narrowed at the base, the two lateral sepals having a slightly curved figure, as in *Renanthera*. The lip is equally three-lobed, rolled round the column, and about half the length of the sepals; it is attached by a moveable joint to a pouch at the base of the column; the lateral lobes are acute and smooth, except near the middle line of the lip, where they are hairy; the middle lobe is ovate, more coriaceous, somewhat longer, and covered with a thick felt, except in the very middle, where three raised naked lines extend to within a short distance of the tip.

As has been already stated, the specimen that flowered with Mr. Loddiges produced but one perfect flower. All the others were in various deformed states, of which the following, whose columns are represented in the annexed cut, were the most important.

No. 1. Sepals 2 and petals 2, decussating. Column opposite one of the sepals, with a hooked spur proceeding from the lower edge of the flat narrow face of the column, and curving upwards; lower half of column terete. Stigma a perforation. Pollen 2 globular masses, united at the base, and excavated behind. Gland 0. No. 2. The same, except that the sepals were broader; the two petals directed forward, and not exactly decussating; no spur on the column; a long cirrhus growing from the hinge of the anther. No. 3. Sepals 3, the two lateral partially united at the base. Petals in natural state. Column excavated at the base, and prominent there, with two teeth at the upper edge of the projection. It was apparently as perfect as in the natural condition; but no lip formed upon it.

These changes may contribute hereafter to our knowledge of the theoretical value of the parts of the flower of Orchids.

The genus Grammatophyllum was originally proposed by Dr. Blume, and was adopted in the Genera and Species of Orchidaceous plants by one of us, in consequence of its having a pair of pollen masses hollowed out behind, and seated each upon one end of a horse-shoe shaped gland; by which circumstance alone it appeared to differ from Cymbidium. Since that time the learned Dutch botanist has published a fine figure and a detailed account of the plant, from which we beg to translate the following passages:—

"As a genus this differs from *Cymbidium* in having the column elevated in front into a hump, and in the peculiar insertion of the pollen masses into the extremities of a horse-shoe shaped caudicle. A more exact examination will show whether *Cymbidium giganteum* of Wallich also belongs to it. The *Cymbidium elegans* of Lindley is the type of a new genus, which is quite distinct both from Cymbidium and Grammatophyllum in its long club-shaped column and two pear-shaped pollen masses furrowed at the back, disjoined, and fixed transversely to a common flat oval caudicle. This may be named CYPERORCHIS *elegans*. Equally different from Grammatophyllum is my genus LEOPARDANTHUS, remarkable for its short broad obliquely truncate column, to the base of which the saccate lip is adnate, and its bifid caudicle peltate and recurved in front, on the two legs of which are seated elliptical pollen masses furrowed at the back. This *Leopardanthus scandens* is a terrestrial caulescent plant, climbing up the trunks of trees, with distichous sword-shaped ribbed sheathing leaves, axillary, erect, many-flowered scapes, and middle-sized spotted flowers." —*Rumphia*, iv., p. 47. Leopardanthus is unknown to us, except by a figure in Blume's *Museum*.

Lip and pollen masses of Grammatophyllum.

The following is the state of our acquaintance with the species belonging to this genus.

1. GRAMMATOPHYLLUM SPECIOSUM; the subject of the foregoing remarks.

2. GRAMMATOPHYLLUM FASTUOSUM; foliis . . . , scapo erecto subcorymboso, floribus coriaceis pedicellis 2-plo brevioribus, sepalis petalisque obovatis undulatis obtusis anticis incurvis, labelli lobo medio velutino infra basin glabro 3-costato, circa costam in fundo scabro-piloso.

A single specimen of this majestic plant was sent us from Malacca by Griffith, who found it on trees, and saw no leaves. It is upon the whole a finer species than *Gr. speciosum* itself. The flowers are not quite so large, but in consequence of the far greater length of their stalks (as much as 5 inches), they form a kind of corymb. Their colour is unknown to us. Both sepals and petals are more spathulate, the 2 anterior of the former far more incurved, and the naked ribs of the lip, instead of reaching almost as far as the point of its middle lobe, and then terminating abruptly, gradually lose themselves in the pile of velvet at the very base of the lobe. The lip appears moreover to be much more coriaceous.

3. GRAMMATOPHYLLUM multiflorum *Lindley in Botanical Register*, 1838, misc. 80, 1839, t. 65; *var.* tigrinum *Ib.* 1842, t. 69; foliis lanceolatis coriaceis subundulatis striatis in apicem pseudobulbi ovati insidentibus, scapo incurvo, racemo erecto longissimo cernuo multifloro, floribus membranaceis, sepalis oblongis obtusiusculis planis, petalis acutis subconformibus angustioribus, labelli trilobi pubescentis medio hirsuti lobo intermedio plano oblongo rotundato lateralibus erectis subfalcatis, jugo in medio carnoso elevato ad basin lobi intermedii interrupto in costas 2 lamelliformes producto, columnæ margine supra basin elevato flexuoso incurvo foveam altam obconicam circumdante.

The two varieties of this species, one with whole-coloured, the other with spotted flowers, were brought from the Philippine Islands, and differ altogether from both *Gr. speciosum* and *fastuosum* in having thin membranous flowers, instead of the thick leathery texture of those two species, and drooping not erect racemes. Dr. Blume suggests that this plant may not be different from his *Gr. scriptum*; and it is not impossible that it may include Rumphius's *second* sort of *Angræcum scriptum* (the one he has figured); but it can scarcely be compared with his first sort, either in leaves, or pseudobulbs, or in the markings of the flower, which have nothing grammical about them or resembling Hebrew characters. The name, then, given by us in 1838 will not have to be disturbed.

* Grammatophyllum (?) pulcrum, *Spanoghe in Linnæa*, xv. 477, a Timor plant, is known only by name.

** Grammatophyllum (?) Finlaysonianum, *Lindley, Genera and Species of Orch.*, p. 173, is now called *Bromheadia palustris*.

GLEANINGS AND ORIGINAL MEMORANDA.

ABELIA UNIFLORA. *R. Brown.* A small hardy (?) evergreen shrub from the North of China, belonging to the Order of Caprifoils. Flowers whitish, produced in July. Introduced by Messrs. Standish and Noble. (Fig. 196.)

Our first knowledge of this shrub was derived from Mr. Reeves, who sent dried specimens from China about the year 1824. It was upon one of these, communicated to Dr. Brown, that the species was established in Dr. Wallich's *Plantæ asiaticæ rariores*, when the peculiarity of the solitary flowers, each subtended by three bracts (not eight, as is stated in De Candolle's Prodromus) was pointed out. The specimens in question had been collected in the province of Fokien, near Ngan-ke-hyen, in the Black Tea Country, lat. 25° N., long. 116° E. The plants in cultivation were procured by Mr. Fortune, and sent to Messrs. Standish and Noble, who consider the shrub to be hardy.

It forms a small erect, nearly smooth bush, with opposite or ternate leaves, ovate, and slightly toothed or entire, rather more coriaceous in our wild specimens than in those which we received from Bagshot. The flowers grow singly in the axils of the upper leaves; their calyx usually consists of a pair of large obovate membranous sepals slightly toothed at the end; occasionally three sepals are present. The corolla is rather longer, white, with a slight violet stain on the upper side; it is remarkable for the great quantity of its spiral vessels, which are unusually tough; there are four stamens, a filiform style, and a three-cornered stigma. The ovary, which is long, narrow, and rather pubescent, contains three cells, one of which contains a single pendulous ovule, while the other two are many-seeded; at its base are three sharp triangular minute scales. It is probable that the *Abelia serrata* of *Siebold* and *Zuccarini*, is not distinct from this. In its hairiness it resembles the garden state of the plant now described, but the sepals in the specimen before us are shorter.

DAMMARA OBTUSA. *Lindley.* A greenhouse Coniferous tree, with very blunt oblong leaves. Native of the New Hebrides. Introduced by Mr. C. Moore. (Fig. 197.)

Of this remarkable species a plant has been received alive. It was found on the island of Aniteura, one of the new Hebrides, by Mr. Moore, who describes it as a tree similar in appearance to the Kauri of New Zealand (*Dammara Australis*), from which it is distinguished by the size and form of both leaves and cones. It grows to a great size, and produces a valuable timber, which is much used for ships' spars. The leaves are nearly four inches long by one and a quarter broad, very exactly oblong, with the end rounded off, without the least trace of point. The cone which I have received, and which seems to be full-grown, is three inches long by one and three quarters wide, somewhat cylindrical, with the ends rounded. The ends of the scales are convex, about four times as broad as long, and quite different in that respect from the spreading points of the New Zealand Kauri.—*Journ. of Hort. Soc.*, vol. vi.

GEISSOIS RACEMOSA. *Labillardière.* A magnificent hothouse tree with long racemes of crimson flowers. Inhabits New Caledonia. Belongs to the Order of Cunoniads. Introduced by Mr. C. Moore.

This is, probably, the finest stove plant that has been introduced for several years. One plant has reached the Garden in good health. Mr. Moore describes it as "a native of the east coast of New Caledonia, in bare, exposed situations. Leaves woolly and slightly serrated when young, entire and glaucous when the plant arrives at a flowering state. It is a small tree, bearing the flowers, which are of a crimson colour, on the old wood in great abundance." The dried specimens sent home have opposite trifoliolate leaves of a firm leathery texture, with obovate, very obtuse leaflets, from 6 to 7 inches long, and between 3 and 4 inches broad. Between each pair of leaves is a sessile, amplexicaul, smooth, roundish, leathery stipule. The racemes of flowers are from 8 to 12 inches long, with stalks even longer than themselves, and bearing a pair or two, or an additional whorl, of great glaucous stipules like those belonging to the leaves. The flowers are rich crimson, packed closely like a Combretum, with globular buds, 4 leathery ovate sepals, shaggy with hairs in the inside, and 8 stamens with crimson filaments nearly an inch long. When in flower these must produce a gorgeous effect, at least equal to that of *Combretum grandiflorum*. From the above slight description, the botanical reader will see that this plant does not quite agree with Labillardière's figure and description; but I am unable to say that Mr. Moore's is a distinct species of *Geissois* without the opportunity, which I do not possess, of instituting a comparison with authentic specimens.—*Journ. of Hort. Soc.*, vol. vi.

ACER CIRCINATUM. *Pursh.* A most beautiful hardy deciduous tree from Oregon, with purple and white flowers, and leaves rich crimson in the autumn. Introduced by the Horticultural Society. (Fig. 198.)

There is probably no hardy tree in this country more eminently beautiful than this, if tree it can be called, for it seems rather a bush. In the spring, when its leaves unfold, they are preceded by long crimson leaf-scales, from two to four to each twig; the leaves when they first come are thin, semitransparent, and a clear light green; at the same time peep out little tufts of purple flowers, with white petals; and in the autumn the plant seems on fire with the rich red of the foliage, more rose-coloured, and not less intense, than that of the most scarlet of Oaks.

Sir William Hooker tells us that the species is found wild on the Great Rapids of the Columbia River, and is common along the north-west coast of North America, between lat. 43° and 49°. Mr. Douglas observes that it is exclusively confined to the woody mountainous country that skirts the shores, and there, among the pine forests, it forms almost impenetrable thickets. The branches are pendulous and crooked, often taking root, as is the case with many species of the genus Ficus. Bark smooth, green when young, white when fully grown. The wood is fine, white, and close-grained, very tough, and susceptible of a good polish. From the slender branches of this tree the native tribes

make the hoops of their *scoop-nets*, which are employed for taking salmon at the Rapids, and in the contracted parts of the river.

ACER VILLOSUM. *Wallich.* A noble tree, from the Himalayas, with the aspect of a Sycamore. Introduced by Messrs. Osborne and Co., of the Fulham Nursery. (Fig. 199.)

Dr. Wallich tells us that this is a very large tree, inhabiting the higher alps of India, approaching towards those of perpetual snow in Sirmore and Kamaon, ripening its fruit in November, at which time "the very fragrant flowers also begin to appear." Dr. Royle says it is only "seen with Pines and Birches on the loftiest mountains, which are for many months covered with snow." In its general appearance this may be compared to the common Sycamore, but is a much finer looking tree, its leaves being thicker, greener, and larger; besides which they are covered with a close fur on the underside, although smooth above; in the autumn they assume a peculiar nankeen tint. The "fragrant" flowers come out in close panicles, covered with long yellowish hairs. Undoubtedly this is one of the finest hardy deciduous trees yet introduced.

FRAXINUS MARIESII. In this Fraxinus we no doubt have a handsome flowered dwarf tree that will be quite hardy in this country. The partiality which planters for many years have had for coniferous trees over those that are deciduous has resulted in comparatively few of the many desirable flowering species at command being planted. Those who are acquainted with *F. Bungeana*, another Chinese species, may form a correct idea of what the new introduction is like. The tree, to all appearance, is a very free bloomer, producing its white flowers in large branching panicles that render it very effective. It will be suitable for planting with other flowering and ornamental trees and shrubs, and should occupy a prominent place in the foreground of shrubberies and pleasure grounds. It was discovered by Mr. Maries, when out in China for Messrs. Veitch, with whom it flowered at their Coombe Wood Nurseries in May, 1882.

200

A small tree, glabrous except the petioles, rachis of the leaf, and branches of the panicle, which are pubescent. Leaves four to six inches long; petiole and rachis very slender; leaflets two pairs and an odd one, one to three inches long, ovate obovate or lanceolate, obtuse acute or acuminate, pale green. Panicles numerous from the uppermost axils, strict, erect; branches slender, strict. Flowers shortly pedicelled. Calyx minute, four-cleft, lobes puberlous. Petals five to six, one-fourth of an inch long, linear-oblong or oblanceolate, obtuse or subacute, white. Stamens two to four, filaments slender; anthers ovate. Female flowers, fruit not seen.—*Botanical Magazine*, 6678.

CARAGANA TRIFLORA. *Lindley.* A hardy half-evergreen shrub from Nepal. Flowers yellow, in May. Belongs to the Leguminous order. Introduced by the East India Company. (Fig. 200.)

BEGONIA (DIPLOCLINIUM) SEMPERFLORENS. *Link* and *Otto.* A succulent hothouse perennial from Brazil. Flowers white in winter and spring. Belongs to the order of Begoniads. (Fig. 201.)

Although not one of the handsomest, this is one of the most useful of its genus in consequence of the long time

during which it remains in flower. It is altogether green in the herbage, and white in the flowers, and destitute of hairiness. Its brittle tapering stems are from one and a half to two feet high. The stipules are long, membranous, and obtuse. The leaves are succulent, roundish ovate, slightly and setaceously serrate, becoming nearly entire when old; at the base they are very slightly oblique, and not at all heart-shaped. The flowers appear in little terminal and axillary

erect cymes, when young, closely covered over with round membranous bracts. The male flowers have four divisions, of which two are round and large, two linear. The females consist of five roundish ovate parts, of which two are smaller. The fruit has three wings, of which one is rather larger than the others, and rounded at the point; its placentæ are double, as in the Diploclinian division of the order.

This species, now common in cultivation, was originally raised in the Royal Botanic Garden, Berlin, from earth sent by Sellow from Port Allegretto in Southern Brazil, and was published under the present name in 1828, in Link and Otto's Icones. The year after, the same name was given by the late Professor Graham to a totally different species, with red stems and flowers, and leafy persistent stipules, figured in the *Botanical Magazine*, t. 2920, and perhaps not sufficiently distinct from *B. spathulata*.

MASDEVALLIA CHESTERTONI. A distinct looking species, collected by and named after the deceased collector Chesterton, when out for Mr. F. Sander. Possibly few of the many who admire and cultivate Orchids, when enjoying the sight of their favourite plants, give more than a passing thought to the men who so often come to an early grave, prematurely stricken down, like poor Chesterton, with the fevers inseparable from exposure to the malaria-laden atmosphere in the countries they penetrate. Yet there is no question that the beautiful plants that are now introduced in such numbers are purchased at the cost of the lives of many of those who thus expose themselves. The subject of our notice belongs to the curious group which *M. bella* and *M. Nycterinia* may be said to represent. The accompanying description is from a flower produced with Mr. Sander.

Petals two-edged, having their apicilar black tumour without any acute warts, the single ancipitous wing upright, exceeding the tumour, the other inferior to it, cucullate, the opening of the cucullus beneath. They are of the finest orange colour, with the tumour and two spots quite black. Sepals strictly ovate, having abrupt tails of equal length, covered and bordered with very small, very numerous, acute black warts, greenish-sulphur coloured, with black tails, black border, and numerous black spots. Lip transversely reniform, with two trapezoid low valves on the stalk, covered with radiating keeled veins, ochre and reddish. Column arched, ochre, with a few brownish-red spots. Leaves a span in length.—*Gardener's Chronicle*, N.S., vol xix., p. 532.

ANTHURIUM FERRIERENSE. At the last March, 1883, meeting of the Royal Horticultural Society a handsome Anthurium was shown by Mr. Bergman, gardener to Baron Rothschild at Ferrieres, under the above name. It is a hybrid between the beautiful recently introduced *A. Andreanum* and *A. ornatum;* it bears the stamp of its parentage, in the flower especially of *A. Andreanum*, but has not the prominent corrugations in the upper surface of the spathe present in that remarkable species, but, like it, the subject of our notice has a glossy smooth surface. The colour may be described as pinkish coral. It is a distinct desirable plant that will no doubt require a warm stove, with soil and moisture such as answer for *A. Andreanum*.

COMPARETTIA MACROPLECTRON. This plant comes from New Granada, and belongs to a very limited genus of Orchids, of which *C. coccinea* and *C. falcata* are the best known. The Comparettias are small growing species that bear pretty flowers, large for the size of the plants that produce them. They require intermediate heat to grow them, and must by no means be kept too warm, or they are not likely to succeed.

Pseudo-bulbs none. Leaves two to three, four to five inches long, linear-oblong, acute, convex above. Racemes four to six flowered, pendulous from a slender curved peduncle; sheaths few, small, distant, scarious; bracts membranous or minute and tooth-like. Flowers distichous, nearly two inches long from the tip of dorsal sepal to the end of the lip, pale rose-coloured speckled with red; pedicel and ovary together nearly an inch long. Dorsal sepal oblong; two lateral sepals combined into a white boat-shaped acuminate lamina under the lip. Petals about as long as the dorsal sepal, oblong, acuminate, brightly speckled with red. Lip large, shortly clawed; blade of the lip transversely oblong, narrowed at the base, cleft at the broad rounded end; the lip is a deeper rose-colour than the petals, and has larger and less vivid spots; spurs of lip slender, papillose towards the tips, which are shortly villous.—*Botanical Magazine*, 6679.

MASDEVALLIA SCHLIMII. This rare species appears to have flowered recently in Sir Trevor Lawrence's famous collection at Burford Lodge. It is said to have been imported by Mr. F. Sander. There is no doubt it is a well-marked, distinct species, and belongs to the curious formed section of this curious genera.

Leaves a foot in length in the wild specimen, three inches in breadth, raceme very thick, six to eight flowered. Flowers reddish-brown, with yellow tails and small odd sepal. Inner and upper part of lateral sepal also yellow, and covered with innumerable small reddish-brown spots. Lip yellowish, covered over with similar spots. Petals and column white, the last with mauve angles. *Gardener's Chronicle*, N.S., vol. xix., p. 532.

PASSIFLORA ATROPURPUREA. *Hort. Haage*, and *Schmidt. P. racemosa*, *P. Loudoni.* This is a fine hybrid variety, likely to become a favourite with those who have the means of cultivating these elegant free-flowering plants.

Foliage like *P. racemosa*, but the inflorescence and flower as to its general shape are more like those of *P. Raddiana.* The flower measures about three inches in diameter, the tube is short cylindrical, pruinose, white inside, less than half an inch long, the sepals deeply keeled reddish-violet or prune-coloured, the petals about the length of the sepals dark blood-red. The outer corona consists of an outer series of threads half the length of the petals, violet spotted with white. The inner row of threads is one-half shorter, of a rich violet colour, each one dilated at the top like the head of a pin. The median corona springs from near the base of the tube, is tubular and membranous below, but above is divided into purple threads.—*Gardener's Chronicle*, N.S., vol. xix., p. 499.

THE PINK BUTTERFLY PLANT.
(PHALÆNOPSIS ROSEA.)

[PLATE 77.]

THE PINK BUTTERFLY PLANT.

(PHALÆNOPSIS ROSEA.)

A most Beautiful Pink-flowered Epiphyte, from MANILA, *belonging to* ORCHIDS.

Specific Character.

THE PINK BUTTERFLY PLANT.—Leaves oblong, leathery, sharp and recurved at the point (from eight to ten inches long). Flowers twelve or thirteen, about an inch in diameter, at the end of a stiff, ascending, drooping, branched, lateral peduncle (eighteen inches long). Sepals spreading, oblong-lanceolate, rather acute, equal, white, slightly tinged with pink. Lip ascending, deep violet, with the lateral segments linear-spathulate, oblique, incurved, the middle one ovate-acuminate, slightly lozenge-shaped; crest thin, concave, lunate, rounded.

Phalænopsis rosea: *Lindley in Gardener's Chronicle*, 1848, p. 671, *with a woodcut; alias* Phal. equestris: *Reichenbach, jun., in Linnæa*, 1849, p. 865; *alias* Stauroglottis equestris: *Schauer in Act. Acad. Nat. cur.*, xix., suppl. 432.

THIS charming plant has found little favour among growers of Orchids, from their not knowing how to manage it. For the most part it appears in collections as a small tuft of broad inelegant leaves, throwing up now and then a puny scape of pallid flowers, in which there is scarcely an element of beauty. But the accompanying figure, which is a faithful representation of a plant that was grown in Mr. Rucker's collection, shows that when it becomes old and healthy, and is perfectly well grown, it assumes quite another appearance. From amidst the deep green convex leaves springs up a branched scape, eighteen inches or two feet high, of an intense and shining purple, at the ends of which appear for months together a long succession of rosy star-like flowers, having a most brilliant ruby lip, warmed with yellow at the base, and enriched by intense violet at the upper end.

The history of the species was originally published in the *Gardener's Chronicle* of Oct. 7th, 1848, in the following words:—"This is a very unexpected addition to the genus Phalænopsis, of which it has exactly the habit. The flowers are small, numerous, and arranged in a loose spike. The lip wants the tendrils so remarkable in *Ph. amabilis* and *grandiflora*, instead of which it is bright rose-colour, with almost the shape of a trowel. It was found in Manilla by Mr. T. Lobb, who sent it to Messrs. Veitch, and who describes it as having a spike of flowers from twelve to eighteen inches long; that which we saw was not more than four inches long, but it had blossomed at sea, and is probably inferior to what it will become hereafter." How inferior, a comparison of this description with the present figure will amply show.

In the year 1849, the younger professor Reichenbach, who has distinguished himself by his critical acquaintance with Orchids, republished it in the *Linnæa*, a German botanical periodical, under the name of *Ph. equestris*, he having ascertained that a certain *Stauroglottis equestris*, described by M. Schauer in his account of the dried Orchids collected by Professor Meyer, was not distinguishable from Phalænopsis. We see no necessity for altering the name by which we originally made the plant known, even although the specific name *equestris* was applied to the plant at an earlier date. We, however, subjoin M. Reichenbach's specific character for the convenience of those botanists who do not possess the *Linnæa*:—

Phalænopsis equestris; fo. oblongis, cuneatis, ped. ex axillis squamarum vetustarum exortis, teretiusculis, 3-vaginatis, nunc ramosis, superne flexuosis, br. minimis, acutis, p. ph. e. oblongis, acutis, p. ph. i. obovatis, acutis, lb tripartito, partitionibus lateralibus lunatis, obtusis, divaricatis, intermedia oblonga apice in apiculum retusum attenuato, callo postice bilobo in basi.

We did not learn at Mr. Rucker's that any peculiar treatment was given to this plant, whose admirable health seems only owing to care, rest, and ample ventilation, combined with the ordinary requisites of skilful management.

THE GENTIAN-BLUE PENTSTEMON.
(PENTSTEMON GENTIANOIDES.)

THE GENTIAN-BLUE PENTSTEMON.
(PENTSTEMON GENTIANOIDES.)

[PLATE 78.]

THE GENTIAN-BLUE PENTSTEMON.

(PENTSTEMON GENTIANOIDES.)

A Hardy Herbaceous Plant, from MEXICO, *belonging to the Order of* LINARIADS.

Specific Character.

THE GENTIAN-BLUE PENTSTEMON.—Erect and tall. Leaves lanceolate, the uppermost widely stem-clasping, acuminate, and smooth. Panicle long, somewhat interrupted, leafy at the base. Flower-stalks short, bearing more blossoms than one. Segments of the calyx broadly ovate, acute, scarcely membranous. Tube of the corolla widely bell-shaped. Sterile filament, smooth, very blunt.

Pentstemon gentianoides: *Bentham in De Cand. Prodromus*, x. 323; *alias* Chelone gentianoides, *Humboldt, Bonpland, and Kunth, Nov. Gen. and Sp.*, ii. 364, t. 172.

MR. BENTHAM has determined, by the examination of authentic specimens, that this is the plant to which Professor Kunth applied the term *Gentianoides*, and not the long-flowered crimson kind so named in the *Botanical Register* and *Botanical Magazine*, and now everywhere in gardens. That kind, having been found near the Real del Monte mines by the collector Hartweg, is in future to be called *P. Hartwegii*, and is readily distinguished by its long narrow flowers, growing in a loose naked panicle, not in a long leafy raceme, as in this instance.

The fine species now represented is as hardy and easily managed as *P. Hartwegii* itself. Its flowers are short, inflated, very distinctly bell-shaped, and bright azure blue; but their effect is

greatly impaired by the numerous floral leaves among which they are mixed. Humboldt and Bonpland found it in Mexico, in cold places, on the slope of the snow-capped mountain of Toluco, at the height of 10,500 feet above the sea, flowering in September. Hartweg sent it to the Horticultural Society from one of his stations named Anganguco, where it grew in pine-forests.

We suspect that the beauty of the plant would be materially enhanced if it were grown in soil that would check its excessive vigour. If, instead of being four feet high, it could be dwarfed to eighteen inches, or two feet, it would be a lovely bedding-out species.

GLEANINGS AND ORIGINAL MEMORANDA.

MEDINILLA AMABILIS. *Dyer.* This is a handsome and very distinct Melastomad. Most of our readers are no doubt acquainted with *M. magnifica*, another handsome species, not now so often met with as it once was. The new species produces panicles of flowers somewhat similar in form to the last-named, but they are borne erect instead of drooping, as in the case of *M. magnifica;* it also differs from the old species in being destitute of coloured bracts. It flowered at Kew in the autumn of 1882, and has been introduced by Mr. Bull, and will most likely be found to succeed under ordinary stove culture, keeping it drier at the root through the winter so as to induce the requisite rest and mature condition of the growth. It comes from Java.

Quite glabrous, shrubby. Stem and branches four-angled. Leaves very large, a foot long by six to eight inches broad, sessile, obovate or elliptic-oblong, acute, often concave, quintuple-nerved, margin wavy, nerves very stout, texture thick, colour bright green; base cuneate or cordate. Panicles terminal, erect, peduncled, pyramidal, much branched, a foot high, by six to nine inches broad; peduncle thick, cylindric, smooth; branches horizontal, whorled, branchlets stout terete, pale, the ultimate ones rosy, bracts none. Flowers shortly peduncled, rose-coloured, one and a half to two inches in diameter. Calyx-tube hemispheric, limb a short thin erect ring obscurely five-lobed or quite truncate. Petals obovate-oblong, obtuse, concave, thick. Stamens ten; anthers pale violet, slender, up-curved, connectives bigibbous at the base; shorter anthers about one-third smaller than the longer.—*Botanical Magazine*, t. 681.

LÆL'A MONOPHYLLA. In this pretty Lælia we see a divergence from other species that find favour with cultivators, inasmuch as it is destitute of the pseudo-bulbs characteristic of the majority of Orchids. The leaves are solitary, as also the flowers, which are borne on slender half-erect stalks. Not only on account of its small growth, occupying little room, but also for its bright flowers—orange-scarlet, a colour rare in Orchids—it is worthy of a place amongst collections of these plants. It may be expected to succeed under conditions such as other West Indian species—namely, plenty of heat in the growing season, with a somewhat drier atmosphere than most Orchids from other hot parts require, and not so low a temperature even in winter as many of the South American species will bear. The plant has bloomed at Kew.

Pseudo-bulbs none; rhizoms forming a branched mass sending up tufts of leafing and flowering stems. Stem and flower scape six to ten inches high, rigid, erect; clothed with long tubular appressed sheaths speckled with pink. Leaf solitary, suberect, two to three inches long, one-half to two-thirds of an inch broad, narrowly linear, oblong, obtuse, coriaceous, mid-rib strong beneath, deep green above, paler beneath. Scape much longer than the leaf, slender. Flowers suberect, one to two inches in diameter, vivid orange-scarlet all over, except the purple anther-cap. Sepals and petals similar, spreading, oblong, subacute. Lip very small, embracing the column, lateral lobes very narrow, rounded; terminal minute, spreading, rounded, papillose on the disk. Column with the dorsal margin of the clinandrium crenulate.—*Botanical Magazine*, t. 6683.

PHILESIA BUXIFOLIA. *Lamarck.* A half-hardy shrub from Chiloe and Patagonia, with stiff deep green leaves and rich crimson tubular flowers. Belongs to Philesiads. Blossoms in September. Introduced by Messrs. Veitch and Co.

Among evergreen non-coniferous shrubs, this is probably the finest which Messrs. Veitch have imported, even although it should require a greenhouse. Dr. Hooker enumerates it "among the handsomest plants of the Antarctic American Flora; occurring along the coast, from the Strait of Magalhaens to Valdivia." Mr. Lobb writes of it thus:—"The Philesia is a plant of very slow growth. In its native country it forms large masses on trunks of trees and rocks, throwing out long slender stems, which creep along beneath the decayed bark, and over rocks that are partly covered with soil. The roots, which proceed from the internodes of the stem, are few and brittle, and very difficult to preserve. No plant that I have seen requires so much care in moving." In another place he writes:—"It is a splendid thing, and probably the most valuable plant of my collections. It often covers trunks of trees and rocks. Sometimes it grows erect, but when found in that state it seldom exceeds a foot in height, and is always growing about the base of dwarf stunted wood, similar to coppice in England. The flowers are produced near the extremity of the branches, have a campanulate form, and are sometimes not less in size than the common Tulip, of a deep rose colour. The petals are thicker in substance than any other flower that I have seen. I have traced it from the level of the sea to the snow line, and it flowers more freely at a great elevation."—*Journ. of Hort. Soc.*, vol. vi.

PASSIFLORA DR. WITTMACK. Passifloras rank amongst the finest flowering plants we possess, not being surpassed by any others of scandent habit, for the decoration of our stoves and greenhouses. Messrs. Haage and Schmidt, the eminent nurserymen of Erfurt, appear to have been successful in raising some seedlings of great promise, that are likely to be acceptable additions to those already in cultivation. The variety under notice is thus described by Dr. Masters, who, we may observe, is the great authority on Passion-flowers.

"A very beautiful variety, more in the way of *P. Loudoni*—the seed-parent—but with petals double the size, and the colour a shade lighter." The foliage resembles that of *P racemosa* (the pollen parent), but the leaves have a few glands at the base of the lobes. The flower-tube is less than half an inch long, cylindric, slightly dilated at the base, purplish-primrose, white within. The sepals deeply winged, rosy-crimson. The petals, nearly as long as the sepals, are of a lovely rosy-crimson colour; coronal threads violet, white spotted, the membraneous corona resembles that of *racemosa*. The gynophore is angular.—*Gardener's Chronicle*, N.S., vol. xix., p. 499.

LINDLEYA MESPILOIDES. *Humboldt & Kunth.* A fine, sweet-scented, evergreen, half-hardy bush, from Mexico. Flowers white. Belongs to the Rosaceous Order. Introduced by the Horticultural Society. (Fig. 202.)

This plant is an evergreen tree, of small size, looking very much like *Mespilus grandiflora*, but with flowers as sweet-scented as the Hawthorn bloom. It belongs to a small set of Rosaceous plants, of which one, the *Kageneckia crataegifolia*, is occasionally seen in this country. The late Professor Don attempted to distinguish them as a peculiar natural order, but unwisely, and on erroneous grounds. That they are really nothing more than Rosaceous plants, is proved by this plant grafting readily on the common Thorn and the larger kinds of Cotoneaster, in which way it is propagated. But although *Lindleya* and its allies are by no means to be separated from *Rosaceæ*, they form a peculiar group, remarkable for their capsular fruit and winged seeds, the latter a circumstance not hitherto observed in other plants of the order.

The botanical peculiarity of the present genus consists in its carpels joining together at the very base into a solid

pistil, although their upper halves, as well as the styles, are entirely distinct. And so, in like manner, when the fruit is ripe, it becomes a hard capsule, the thick bony lobes of which separate freely at the upper half, but not at the lower without violence. In our gardens the plant proves to be about as hardy as *Escallonia*, but not more so. It remains in flower for a month or six weeks after the beginning of July. In its native country it forms an evergreen slender-growing shrub, twelve to fifteen feet high, near the natural bridge called Puente de Dios, 45 miles N.E. of Real del Monte, at an elevation of 6,500 feet above the sea. It also occurs sparingly near the Hacienda de Santa Ana, in the State of Oaxaca, always preferring a dry chalky soil.—*Botanical Register*, vol xxx., t. 27.

IMPATIENS PLATYPETALA. *Lindley* (*alias* I. pulcherrima, *Dalzell*). A handsome tender annual, from Tropical India. Flowers large, violet-purple. Belongs to the order of Balsams. Introduced by Messrs. Veitch.

This very handsome stove plant is not uncommon in gardens, to which it was introduced by Messrs. Veitch. It was well figured in the *Botanical Register* for 1846, under the name of *I. platypetala;* and has been admirably represented in the *Botanical Magazine* (t. 4615), under the name of *I. pulcherrima*, which must be cancelled. Sir William Hooker there speaks of it to the following effect:—

"One of the finest of the Indian Balsams. Mr. Dalzell found the plant near Warree, in the Southern Concon, Bombay, and the seeds were sent to us in 1850. The plants continued to bear flowers during most of the summer months. Like the other tropical species of *Impatiens*, a succulent tender annual. The seeds should be sown in spring, and if placed in a gentle heat they will soon vegetate. When the young plants are of sufficient strength, they must be potted singly in small pots, and duly shifted into larger ones as they increase in size, which they will do rapidly if supplied with rich soil and plenty of water, and kept in a close pit or frame. A few may be planted in the open air in a sheltered place, but they are liable to suffer from too free an exposure to the winds and rain of this climate."—[To this we may add, that, when regarded as a stove annual, this species merits universal cultivation. It flowers all winter long.]

DÆDALACANTHUS MACROPHYLLUS. From a cultural point of view this plant may be looked upon as identical with Eranthemums, several of which are well known to gardeners as handsome flowering plants that are especially useful for blooming in winter. The subject of our notice, although comparatively seldom met with, is not new, as we have seen it some years back flowering in winter at Kew, where its violet-blue flowers were very effective. It succeeds under ordinary treatment such as other late autumn or winter-blooming plants of a like soft-wooded nature. Introduced from Burmah.

Erect, two to three feet high, sparingly branched. Leaves petioled, lower five to nine inches long, elliptic-lanceolate, acuminate, base of the blade decurrent on the petiole, margin sometimes obscurely serrulate or denticulate. Spikes long-peduncled, strict, erect, three to eight inches long, narrow, glandular-puberulous; bracts loosely imbricating, one-half to three-fourths of an inch long, appressed, ovate or obovate, tip rounded, acute or mucronate, green, strongly veined; bracteoles narrowly lanceolate, equalling or rather longer than the calyx. Calyx minute, cleft to the middle into five lanceolate erect glandular-pubescent lobes. Corolla one and a quarter to one and a half inches long, erect, pale violet-blue; tube very slender, curved; throat short, moderately inflated; limb reflexed; lobes oblong-obtuse, with darker violet veins. Filaments about as long as the corolla-lobes. Ovary slender, glandular, pubescent. —*Botanical Magazine*, 6686.

CESTRUM HARTWEGII, VAR. PUBESCENS. New handsome flowering plants that will succeed in an ordinary greenhouse are not now of frequent occurrence, consequently this Cestrum may be hailed as an acquisition. There seems to be nothing definite known as to where it comes from. Those acquainted with *C. corymbosum* may form some idea of what the new plant is like, but it is different in colour.

Stem, leaves, bracts, calyxes, and corollas all softly pubescent, with short hairs. Petiole one-third to three-quarters of an inch long; lamina on vigorous growing shoots, five to six inches long by two and a quarter to two and three quarter inches broad; on flowering shoots much smaller; elliptic or elliptic ovate, acute or shortly acuminate at the apex, base rounded or acute. Flowers bright crimson, in large dense terminal panicles, composed of numerous pedunculate, dense, bracteate, cymose fascicles. Calyx turbinate, reddish-tinted, six or seven lines long, obtusely five-angled, five-toothed, teeth acute, one-third the length of the whole calyx. Corolla an inch long, tubular, gradually inflated upwards, and abruptly constricted at the five to six-toothed mouth; teeth small, half line long and broad, triangular, acute, spreading. Disk cup-shaped, crenulated on the margin, two-thirds as long as the ovary, which is purple on the top. The flowers secrete a great abundance of nectar.—*Gardener's Chronicle*, N.S., vol. xix., p. 656.

BRASAVOLA ACAULIS. A singular epiphyte from Central America. Belonging to Orchids. Flowers cream-colour, at midsummer. Introduced by G. U. Skinner, Esq. (Fig. 203.)

B. acaulis; foliis teretibus rectis et flore subsessilibus, sepalis petalisque linearibus patulis æqualibus, labelli lamina subrotundo-ovatâ ungue cucullato duplo longiore.

This singular plant approaches *B. glauca* in its manner of growth, the stem being so short as to be scarcely perceptible, and *B. grandiflora* in the size and form of the lip. It is strikingly different from all others. Only one flower appears on a very short stalk greenish white, with some tendency to spotting; the firm and narrow sepals, about three inches long, and curving round the lip, the flat part roundish ovate, and about twice as long as the rolled up claw. The leaves are remarkably short and stiff.

THE GOLDEN SWAN-ORCHIS
(CYNOCHES AUREUM.)

[PLATE 79.]

THE GOLDEN SWAN-ORCHIS.

(CYCNOCHES AUREUM.)

A Noble Epiphyte, with Clear Yellow Flowers, from CENTRAL AMERICA, *belonging to* ORCHIDS.

Specific Character.

THE GOLDEN SWAN-ORCHIS.—Raceme long, pendulous, compact. Sepals lanceolate, flat. Petals of the same form, but rolled backwards from the point. Lip with a short stalk, at the end ovate and acute, with a round disk the edge of which is broken up into short curved processes forked at the point; the two lowest larger, distinct, and straight. Column the length of the lip.

TO the very singular race of Swan-Orchises, we have the gratification of adding a form introduced from Central America by Mr. Skinner. It is very near the "Spotted," from which it differs in having a shorter and more compact raceme, whole-coloured pale clear yellow flowers, and a lip the terminal lobe of which is short and ovate, not long and linear-lanceolate, while the appendages into which the edge of the disk is broken up are short, forked, all radiating from the centre, instead of the uppermost one being bent back, and the two lowest are very considerably larger than the others.

Is this a species? or is it a form of *C. maculatum*, or of some other of this masquerading genus. Upon this subject we venture to repeat what was said years ago in the *Botanical Register*, upon the surprising transformations to which the Swan-Orchises are subject. The plant to which the remarks applied was the green state of the Egertonian Swan-Orchis.

"This is evidently a variety of the *C. Egertonianum*, distinguished by its flowers being of a pale watery green, and not deep purple. But what is *C. Egertonianum* itself? In Mr. Bateman's magnificent work we are told how the long-spiked small purple-flowered

C. Egertonianum is only the short-spiked large green-flowered *C. ventricosum;* how the same plant at one time bears one sort of flowers, and at another time another sort; and we have ourselves shown how the same plant, nay the same spike, is sometimes both the one, the other, and neither. *C. Egertonianum* is then a 'sport,' as gardeners say, of *C. ventricosum.*

"But what again is *C. ventricosum?* Who knows that it is not another 'sport' of *C. Loddigesii,* which has indeed been caught in the very act of showing a false countenance, something wonderfully suspicious, all things considered, and justifying the idea that it is itself a mere Janus, whose face is green and short on one side, and spotted and long on the other.

"Then, if such apparently honest species as *C. Egertonianum, ventricosum,* and *Loddigesii* are but counterfeits, what warrant have we for regarding the other so-called species as not being further examples of plants in masquerade? For ourselves we cannot answer the question: nor should we be astonished at finding some day a Cycnoches no longer a Cycnoches, but something else; perhaps a Catasetum. If one could accept the doctrine of the author of the 'Vestiges,' it might be said that in this place we have found plants actually undergoing the changes which he assumes to be in progress throughout nature, and that they are thus subject to the most startling conditions only because their new forms have not yet acquired stability."

Since we have space for the purpose, we avail ourselves of the opportunity to give a list of the forms of this strange genus.

SO-CALLED SPECIES OF CYCNOCHES.

* *Lip perfectly entire, fleshy, without appendages.*

1. C. Loddigesii *Lindl. Gen. & Sp. Orch.*, p. 154; *Bot. Cab.*, t. 2000; *Bot. Reg.*, t. 1742.—*Surinam.*—Flowers very large, fragrant, green and purple, with a white spotted lip. Sports by producing smaller broad-lipped flowers without scent, and with a very short cucullate club-shaped column. This is the original state of the genus.

2. C. ventricosum *Bateman Orch. Mex. & Guatemala*, t. 5.—*Guatemala.*—Flowers large, green, with a white lip. Sports to *Egertonianum;* and even towards the cucullate form of *C. Loddigesii,* as was ascertained by Sir P. Egerton, in 1849.

3. C. chlorochilon *Klotzsch; Sertum Orchidaceum*, t. 16.—*Maracaybo.*—Flowers very large, green, whole-coloured. Has not been observed to sport; but is probably a mere variety of *C. ventricosum.*

* * *Lip having the edge broken up into fleshy appendages.*

4. C. pentadactylon *Lindl. in Bot. Reg.*, 1843, misc. 26, t. 22.—*Brazil.*—Flowers large, yellowish green, banded with brown. In the garden of Mr. Kenrick, of West Bromwich, this produced two flowers of *Egertonianum,* among the usual flowers peculiar to itself, Sept. 12, 1851.

5. C. aureum *Lindl in Paxt. Fl. Garden*, vol. iii., p. 23.—*Central America.*—Flowers large, clear pale yellow. Has not been yet observed to sport.

6. C. maculatum *Lindl. in Bot. Reg.*, 1840, misc. 8; *Sertum Orchidaceum*, t. 33.—*Mexico? La Guayra.*—Flowers small, yellow, spotted with brown. Has not been observed to sport.

7. C. Egertonianum *Bateman Orch. Mex. & Guatemala*, t. 40; *Bot. Reg.*, 1843, t. 46.—*Guatemala and Mexico.*—Flowers small, purple or greenish, unspotted. Sports to *Ventricosum* and to *Pentadactylon.*

* * * *Lip three-lobed, membranous, without appendages.*

8. C. Pescatorei *Lindl. in Paxt. Fl. Gard.*, vol. i., p. 114; *alias* Acineta glauca *Linden.*—*New Granada.*—Flowers yellow and brown, in a long pendulous raceme. Has not been observed to sport.

9. C. barbatum *Lindl. in Journ. of Hort. Soc.*, vol. iv.; *Bot. Mag.*, t. 4479.—*New Granada* and *Costa Rica.*—Flowers soft delicate flesh-colour, spotted with red. Has not been seen to sport.

THE RETUSE ECHEVERIA.
(ECHEVERIA RETUSA.)

[PLATE 80.]

THE RETUSE ECHEVERRIA.

(ECHEVERRIA RETUSA.)

A Handsome Winter-Flowering Greenhouse Succulent Plant, from MEXICO, *belonging to the Order of* HOUSELEEKS.

Specific Character.

THE RETUSE ECHEVERRIA.—Caulescent. Leaves obovate, spathulate, finally scattered, glaucous, when old retuse and somewhat crenated; those of the stem linear-oblong, entire, free at the base. Panicle small, dense, divaricating, somewhat corymbose, with few-flowered branches. Sepals narrowly ovate, acute, unequal, much shorter than the corolla. Petals acute, keeled, gibbous at the base.

Echeverria retusa: *Lindley in Journ. of the Hort. Soc.*, vol. ii., p. 306.

THIS is by no means so well known a plant as its usefulness should have rendered it, seeing that it was published many years since in the *Journal of the Horticultural Society*, with the following account:—

"It was raised from seeds, received from Mr. Hartweg in February, 1846, and said to have been collected on rocks near Anganguco, in Mexico. A dwarf species, not unlike a contracted form of *E. Scheerii*. Its leaves are originally closely imbricated, but are never truly rosulate, and by degrees separate as the stem lengthens; they are broad at the point, but acute when young; when old become extremely blunt, and irregularly crenated, as well as bordered with purple. The flower-stem is from nine inches to more than a foot high, and bears at the very summit a compact panicle of handsome crimson flowers, covered with a delicate bloom, and orange-coloured inside. It is a pretty green-

house, half-shrubby species, growing from one to two feet high, and thriving vigorously in a light mixture of sandy loam with leaf-mould and plenty of sand. It is easily increased by the leaves, and flowers freely from November to April, that is to say, throughout the winter."

No plants are better suited to window gardens than these Echeverrias, all the species of which blossom the whole winter long, will thrive in soil of any sort, are not very impatient of either heat or cold, dryness or dampness, and which are so varied in colour, form, and manner of growth, as to form of themselves variety enough for such a space as the recess of a window affords. One of the most singular is the *Pachyphytum bracteosum* of Klotzsch, which does not appear to be in any way distinguishable from the genus.

GLEANINGS AND ORIGINAL MEMORANDA.

SALVIA CANDELABRUM. *Boissier.* A stately hardy perennial, from the south of Spain, with large leafless panicles of violet and yellow flowers. Belongs to Labiates. Introduced from Malaga by E. Delius, Esq. (Fig. 204.)

204

This is one of the many curious plants discovered in the south of Spain by the indefatigable zeal of M. Boissier, the distinguished Swiss traveller. Not having within reach the work in which it was published, we can only state that it is an inhabitant of the Sierra Nevada of Grenada, in the district, we presume, which produces the *Abies Pinsapo*. Its leaves are like those of the common sage, to which it is nearly related ; but it throws up a glaucous branching naked panicle, three feet long, of large flowers, of which a fragment is represented in the annexed cut. These flowers have a greenish-yellow upper lip, and a rich violet lower one ; and they would produce a fine appearance if any considerable number opened at the same time. It happens however that they are short-lived, and drop off soon after expansion, so that no seeds are ripened, and the plant has a shabby appearance. Probably the flowers would hold on, and the beauty of the species be much enhanced, if it were grown in a little bottom heat. In its native country, where everything is favourable to its growth—hot dry weather when in flower, and warm damp weather while growing—it is reported to be a noble-looking thing, even in the rich gardens of Grenada.

SAXIFRAGA LINGULATA, VAR. COCHLEARIS. A very rare, small-growing Saxifraga, with compact tufted habit, in this respect like many others of the family. By those who make collections of these pretty plants it will be hailed as a welcome addition. The red flower-stems afford a nice contrast to the pure white of the flowers. It may be expected to thrive under conditions of soil and general treatment such as other small growing kinds of this numerous genus. It appears to have flowered with Mr. J. Atkins, of Painswick, who, we understand, is an enthusiastic cultivator of herbaceous plants. From the Maritime Alps.

Densely tufted; root stocks short, much branched. Leaves densely rosulate, spreading, one-half to one inch long, linear with a dilated rounded or spathulate tip, thickly coriaceous, glaucous blue with cartilaginous margins, edged with a crust of lime, quite glabrous or the young slightly hairy. Flower-stems from the centre of the rosettes of leaves, five to seven inches high, very slender, bright red-brown, as are the branches, peduncles, and pedicels of the thyrsoid or subcorymbose erect open panicle; bracts and leaves on the flower-stem small, erect, linear, red-brown. Flowers one-half to three-quarters of an inch in diameter. Calyx red-brown, tube hemispheric; lobes small, ovate, obtuse. Petals spreading, obovate, tip rounded, pure white. Filaments short; anthers small. Styles short, recurved. —*Botanical Magazine*, 6688.

PODOCARPUS NUBIGENA. *Lindley.* A beautiful hardy evergreen bush, or tree. Native of Southern Chile. Belongs to Taxads. Introduced by Messrs. Veitch and Co. (Fig. 205.)

205

P. nubigena; (Eupodocarpus) monoica foliis linearibus mucronatis subtus glaucis, pedunculis solitariis receptaculo oblique bilobo obovato brevioribus, fructibus oblongis oblique obtuse apiculatis.

This is one of the "Yews" mentioned by Mr. Lobb under Saxe-Gothæa (vol. ii., p. 130), and in general aspect it sufficiently justifies the name. It is a plant with stiff, linear, deep-green leaves, having a broad double glaucous band on the under side. The fruit is drupaceous, and grows singly in the axils of the leaves on very short stalks; the receptacle is obovate, and obliquely two-lobed; the nut oblong, slightly bossed, and curved inwards at the point. No species of Podocarp yet discovered agrees with this. *P. Lamberti*, from Brazil, has leaves green on both sides, and globose fruit. *P. chilina* has broader leaves, also not glaucous, and fruit with very long stalks. *P. andina* has the fruit in spikes.—*Journal of Horticultural Society*, vol. vi.

DENDROBIUM INFUNDIBULUM (*Lindley*) ORNATISSIMUM, *n. var.* This is evidently a very fine form of the beautiful *Dendrobium infundibulum*. It is described as follows by Professor Reichenbach.

A grand Dendrobium, with flowers of waxy texture. The flowers exceed by nearly one third the best European flowers of the typical plant. The blotches at the base of the column and the stripes and lines on the disk of the lip, which in the usual type are yellow, are here of the very finest cinnabar. The nearest ally in colour is *D. Jamesianum.—Gardener's Chronicle*, N.S., vol. xix., p. 656.

MASDEVALLIA TRIDACTYLITES, *n. sp.* A pretty species of this now numerous genera, to which there are still numerous additions both as regards these with handsome flowers, as also the section whose flowers are more singular than beautiful.

A lovely gem of the lovely Triaristella group. Its cæspitose stems have very thin semi-terete, acute, channelled leaves, and finally capillary peduncles, and small flowers with a yellow odd sepal, and brownish-purple lateral sepals, having in front of their apex sigmoid, blunt, upright orange tails. Petals very small, white, with a purple central blotch. Lip curvate, cordato-ligulate, acute, with two keels before the base, purple at the base and lip, white in the centre. Column purple, with yellow terminal teeth.—*Gardener's Chronicle*, N.S., vol. xix., p. 784.

TROPÆOLUM SPECIOSUM. *Endlicher & Pöppig.* A hardy climbing perennial, with brilliant scarlet flowers, native of Chiloe and Patagonia. Blossoms all the summer. Belongs to the Order of Indian Cresses (*Tropæolaceæ*). Introduced by Messrs. Veitch in 1847.

Among the garden treasures imported from the temperate parts of South America, this is one of the most valuable. It scrambles up sticks or bushes to the height of five or six feet, and bears an enormous quantity of scarlet flowers among a tender pale green foliage. In the winter it dies down to the perennial roots. It has been well figured in the *Botanical Magazine*, t. 4323, but the colour there does injustice to the plant, which, at a distance, looks like a mass of the scarlet cloth from which soldiers' jackets are made. The first discoverer of it was Mr. Pöppig, who found it in the subandine regions of southern Chile. Mr. Lobb says that it inhabits "*cool shady places*, often covering the branches of shrubs, and displaying a profusion of dark crimson, velvety flowers." The words in italics, are no doubt, the key to the cultivation of the species. It can scarcely be said to be much in cultivation, although introduced many years ago. No doubt it has been generally lost; perhaps, as in our own case, by giving it a warm sunny border. The experience of Messrs. Veitch shows that it cannot bear direct sunshine, or exist in a soil subject to dryness. With them it runs about in an American border, under a north wall, where the noon-day sun never reaches; its creeping roots force their way through the neighbouring gravel walk, and the strong vigorous shoots form so compact a mass of flowers and leaves, that the wall seems as if lined with scarlet cloth. There is no question that the plant is perfectly hardy, if the border where it grows is rather damp, and if a few leaves are used to shelter the roots in winter.

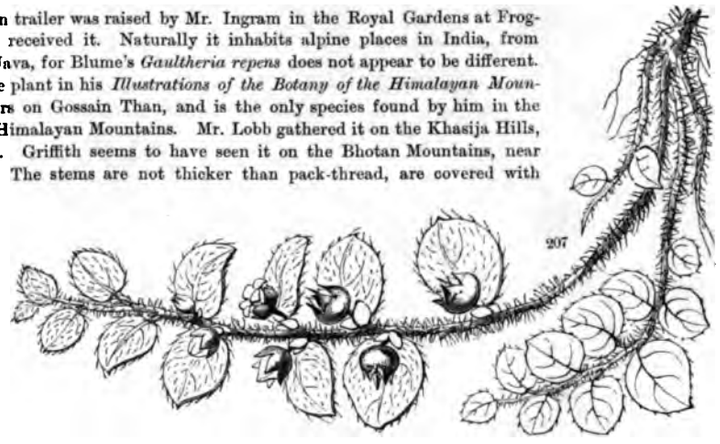
FAGOPYRUM CYMOSUM. *Meisner.* (*alias* Polygonum emarginatum *Wallich*; *alias* P. acutatum *Lehmann*; *alias* P. cymosum *Treviranus.*) A hardy perennial, with white sweet-scented flowers, from Nepal. Blossoms in autumn. Belongs to the Order of Buckwheats. Introduced by the East India Company. (Fig 206.)

206

This is a fine-looking perennial creeping-rooted plant, with stout erect stems 3 feet high. The leaves are triangular and tapering to each angle, with a cordate base, large and flat, forming an excellent relief to large spreading cymose panicles of pure white flowers, resembling those of the common Buckwheat (*Fagopyrum esculentum*), and like them succeeded by triangular fruit with winged angles. Flowering in the autumn, sweet-scented, and quite hardy, this species is particularly well suited to decorate shrubberies, and places where plants of a stouter

growth are wanted than those of parterres. It is a good bee plant, yielding abundance of honey. Any kind of garden soil appears to suit it. There seems to be little difference between it and the *Fagopyrum triangulare*, except that in the latter the branches of the inflorescence are usually in pairs, longer, and more divaricating, while the fruit is said to have two of its angles blunt, a circumstance we have not had the opportunity of verifying. Prof. Meisner remarks that the hollow stem of this plant is a circumstance without parallel among Polygonums, but he was not then acquainted with *Fagopyrum triangulare*.

GAULTHERIA NUMMULARIÆ. *De Candolle* (*alias* G. nummularioides, *D. Don*; *alias* G. repens, *Blume*). A trailing evergreen greenhouse plant, with white flowers, and reddish purple berries. Native of the Himalayas. Belongs to Heathworts. Raised in the garden of Her Majesty at Frogmore. (Fig. 207.)



This pretty little evergreen trailer was raised by Mr. Ingram in the Royal Gardens at Frogmore, whence only we have received it. Naturally it inhabits alpine places in India, from Gossain Than, and Nepal, to Java, for Blume's *Gaultheria repens* does not appear to be different. Dr. Royle, who has figured the plant in his *Illustrations of the Botany of the Himalayan Mountains*, t. 63, says that it occurs on Gossain Than, and is the only species found by him in the more northern portion of the Himalayan Mountains. Mr. Lobb gathered it on the Khasija Hills, and sent it to Messrs. Veitch. Griffith seems to have seen it on the Bhotan Mountains, near Tassyassy, "on wet banks." The stems are not thicker than pack-thread, are covered with brown hairs, and trail upon the ground, forming a close entangled carpet. The leaves are sometimes nearly circular, whence its name, or they acquire an ovate form, and are pointed; at their edges, and all over the under side, are scattered the same kind of stiff brown hairs as clothe the stem (in order to show these, the accompanying figure represents the under side chiefly; the upper side is smooth). The small white flowers grow singly in the axils of the leaves, and are entirely hidden by them. They are succeeded by reddish-purple glabrous fruit, growing on very short stalks, hidden by two or three smooth brown scarious cucullate bracts. The breadth of the leaves in our wild specimens varies from one-quarter to three-quarters of an inch. We may be censured for taking De Candolle's specific name *Nummulariæ*, instead of the older one of *num-mu-la-ri-o-i-des*, but we prefer the former to such a barbarously constructed uncouth name as the last.

LOMATIA FERRUGINEA. *R. Brown*. A half-hardy shrub from South Chili, with beautiful ferruginous foliage. Belongs to Proteads. Introduced by Messrs. Veitch and Co.

This charming plant deserves a place wherever beautiful foliage is valued. According to Cavanilles, it forms a shrub ten to twelve feet high, with ferruginous branches. The leaves are deep green, bipinnatifid, ferruginous when young, from six to twelve inches long, with some of the leaflets occasionally lobed. The flowers appear in short erect racemes from the axil of the leaves, and are green outside and crimson inside. Mr. Lobb does not say where it grows naturally, but according to Cavanilles, it inhabits S. Carlos in Chili, in places occasionally overflowed by salt water.

PHALÆNOPSIS SANDERIANA. *Rchb., f.* This is another addition to the beautiful Moth Orchids. We have not seen the plant in flower, but give Professor Reichenbach's description, which doubtless conveys a correct impression of it. It will, we suppose, succeed under like treatment to the other members of the Phalænopsis family.

Roots like *P. amabilis*, a little flat. Leaves longer than usual, lighter and mottled darker, or simply green. Petals very broad, sepals and petals both whitish-rose to rose-purple, in some varieties with darker purple well defined areas. Sometimes the sepals have the lightest whitish-ochrey hue. Lip white, with cinnamon or purple stripes and some yellow. The tendrils assume that anchor-like direction that is specified in *Phalænopsis Schilleriana*. The callus is nearly horseshoe-shaped, has one blunt angle outwards on each side, and over it the narrower ascending arm is emarginate, blunt angled. It is white or white with some sulphur, spotted with brown or purple freckles.—*Gardener's Chronicle*, N.S., vol. xix. p. 656.

HOYA LINEARIS. A very distinct species with slender branches, and long narrow hairy leaves, quite different to those of other species in cultivation. The flowers are produced from the points of the shoots, ground-colour white with pink centre, not unlike those of the favourite *H. bella;* the new-comer will most likely be found to thrive under conditions of heat, moisture, and other matters required by the above-named well-known kind. From its drooping habit it will make an elegant basket plant. From the Himalaya.

More or less hirsute, with soft spreading hairs. Stems tufted, pendulous, very slender, flexuous, a foot long and upwards. Leaves one and a half to two inches long, by one-eighth to one-sixth of an inch in diameter, shortly petioled, cylindric, subacute, deeply grooved beneath, dark green. Flowers in a sessile terminal lax umbel; pedicel one to one and a half inches long. Calyx-lobes small, hirsute, ovate-lanceolate. Corolla half an inch in diameter, white, recurved, glabrous within; lobes short, broad, obtuse. Coronal processes stellately spreading, obtuse, subcylindric, very pale pink.—*Botanical Magazine*, 6682.

CAMPTOSEMA RUBICUNDUM. *Hooker & Arnott.* (*alias* Kennedya splendens *of Gardens*, and *Meisner's Plantæ Preissianæ*, 1. 89 *in notâ.*) A beautiful greenhouse twiner, of the Leguminous Order, from South Brazil. Flowers scarlet.

A very handsome climber, long ago described from dried specimens in the *Botanical Miscellany*, and for some time cultivated in Germany, and since in England, as *Kennedya splendens*. It was so named, as we learn from Mr. Bentham, by Meisner, who cautiously observes, "Originis ignotæ;" while Dr. Walpers confidently says, "Hab. in Nova Hollandia." It has the habit of a New Holland *Kennedya*, but it is a native of southern Brazil and the adjacent Argentine provinces. The racemes remind one of those of *Laburnum* or of *Wistaria sinensis*, but they are of a deep ruby-red colour. A climbing shrub of great length; the older portions of the stem as thick as one's finger, and reticulated, as it were, with pits or hollows in the oblong areoles. Young leafy branches slender, terete, herbaceous, glabrous. Leaves distant, on long petioles, trifoliolate; leaflets petiolulate, oblong, or oblong-elliptical, retuse, glabrous, glaucous beneath. Racemes on rather long peduncles, compound, eight to ten inches in length, drooping, many-flowered. Calyx with two small bracteas at the base, tubular-campanulate, somewhat two-lipped, and irregularly four to six-lobed. Petals of the corolla deep ruby-red, nearly equal. Vexillum partially reflexed, ovate, clawed, with two blunt teeth at the base of the lamina. Alæ and carina oblong, clawed, each petal with a blunt tooth at the base of the lamina. Stamens diadelphous (9 and 1). Ovary linear, on a long stipes, and tapering into a subulate style. Legumen three inches long, stipitate, compressed, downy, acute. A stove-climber, well adapted for training up rafters or on trellis-work, and which grows freely, especially if planted in a bed of good rich soil. Where there is not sufficient room for it to extend, it may be treated as a pot-plant, and trained upon a trellis fixed to the pot; but we have not found it, either way, to flower very readily. It may be increased by cuttings, placed in heat under a bell-glass.—*Bot. Mag.*, t. 4608.

This species is not very uncommon in Gardens, and was long since figured under its garden name in *Paxton's Magazine of Botany*. Its magnificent flowers would ensure its universal cultivation if the plant could but produce them. From the preceding remarks it would seem to require more light and heat than it usually receives.

STENOCARPUS FORSTERI. *R. Brown.* An

evergreen greenhouse shrub, of little beauty, from New Caledonia. Introduced by the Horticultural Society. Belongs to Proteads. (Fig. 208.)

Of this a live plant has been received from Mr. Moore, who speaks of it as a small Proteaceous plant, not uncommon on the east coast of New Caledonia. It is a bush with obovate, retuse, flat, veinless, or slightly three-ribbed leaves tapering to the base, and umbels of small apparently white flowers. It will not prove of any horticultural interest.—*Journ. of Hort. Soc.*, vol. vi.

SALPIGLOSSIS SINUATA. *Ruiz and Pavon;* flava. (VARIETIES OF COLOUR:—1. S. atropurpurea *Graham;* 2. S. straminea *Hooker;* 3. S. picta *Sweet;* 4. S. Barclayana *Sweet.*) A handsome hardy annual, from Chili, with flowers of various colours, deep purple, straw-colour, variegated, parti-coloured and bright yellow. Belongs to Linariads. (Fig. 209.)


209

We have little doubt that Mr. Bentham is quite right in reducing to one species the many coloured forms of Salpiglossis that our gardens contain, for neither in their wild nor cultivated state can any appreciable difference except that of colour be detected among them. They all inhabit Chili, where they grow on dry clay banks, which are baked by the sun till they are little less hard than bricks. The variety now called *flava* in gardens has whole-coloured, bright yellow flowers, and is one of the best that have been raised. It is more cultivable than some of them, succeeding perfectly well if sown in beds in the open air, not allowed to be crowded, and treated in all respects like a Lobel's Catchfly, a Collinsia, or any such well-known plant.

210

EPIDENDRUM REPLICATUM. An orchidaceous epiphyte, with yellowish flowers stained with brown, and a white and pink lip. Native of New Grenada. Introduced by Sigismond Rucker, Esq. (Fig. 210; *a*, a magnified representation of the lip flattened.)

E. replicatum; (Encyclia hymenochila acuta) floribus dense racemosis, sepalis oblongo-lanceolatis acutis, petalis rotundatis unguiculatis apiculatis, labelli trilobi lateralibus oblongis subtruncatis apice reflexis intermedio longiore crispo rhombeo acuminato lateribus omnino replicatis.

A very pretty species, exhibited by Mr. Rucker at a meeting of the Horticultural Society, when it received a silver Knightian medal. The racemes were closely many-flowered, about eighteen inches high. The sepals and petals are dull yellow, stained with brown in the middle below the point, but with a yellow border all round; the former are oblong-lanceolate and acute, the latter are linear below, and then spread out into a circular disk, terminated abruptly by a small point. The lip, which is white, streaked with pink, is remarkable for the manner in which the two sides are turned downwards, so that their backs actually touch. Most nearly allied to *Epidendrum diotum*, a native of the same country.

DENDROBIUM ALBUM. *Wight.* A neat-looking Indian epiphyte, with pure white flowers. Introduced by Messrs. Veitch. (Fig. 211.)

211

The following is the account given by Dr. Wight of this species:—

"Erect, jointed; stems enlarging from the base to the apex, internodes much shorter than the leaves. Leaves oblong, elliptic, acuminate. Flowers axillary, paired, long-peduncled; sepals ovate, acute; lateral ones falcate; petals obovato-elliptic, obtuse, larger than the posterior sepal. Lip three-lobed; lateral lobes entire, obtuse, middle one cucullate, ovate, acute, saccate at the base, ciliate. Flowers pure white. Native of the Iyamally Hills. Flowering in September. This is one of the handsomest of the genus I have yet met with; the large pure white flowers and dark foliage are very conspicuous. It seems to be rather rare, as I have only once obtained specimens."—*Indian Orchids*, No. 1645.

The plant is scarcely distinct from *D. aqueum*, figured in the *Botanical Register*, 1843, t. 54; appearing to differ in nothing except a more narrow middle lobe of the lip, more distinct fringes upon its edge, and an absence of the green tinge which has been observed in *D. aqueum*.

ADIANTUM NOVÆ-CALEDONIÆ. *Keyserling.* A distinct looking maiden-hair fern which was exhibited at the Manchester Whit-week show in the year 1883, by Messrs. Birkenhead, the noted fern growers of Sale, Manchester. It is a pretty plant, and was awarded a First-Class Certificate. Most likely it will be found to succeed under treatment such as required by the generality of tender exotic species.

Caudex tufted, stipites blackish-purple and semi-terete, as also the principal rachides. Fronds roundish in circumscription, pedately pentagonal in outline, and tripinnate in division at the basal part, bipinnate above, of a darkish green colour, paler beneath. Lowest pair of pinnæ bipinnate, posterior lower pinnule larger than the anterior one. The pinnæ are narrow, lanceolate in general outline, irregular in the form and size of the pinnules, of which there are from ten to twelve pairs on each pinnæ. The pinnules are deeply and coarsely toothed, the largest bearing one to three prominent sori near the base on the upper margin, sori circular, indusium cordate orbicular. Veins close set, dichotomously branched, free, in the dry plant prominent on the upper surface, the under surface punctuate.—*Gardener's Chronicle*, N.S., vol. xix., p. 720.

ODONTOGLOSSUM FERRUGINEUM. *H. G. Rchb., f.* Another of the doubtful natural hybrids; and like a good many others that have appeared in the collections of the many who now cultivate these lovely plants, not as in times past by two or three but in hundreds, or in some cases thousands. It has flowered with Mr. E. Harvey, Aigburth, Liverpool.

A most curious Odontoglot. The sepals and petals are dark cinnamon coloured with yellow tips, rather broad, with the lateral sepals standing under the lip, and the petals distinctly toothed. Lip subcordate over its stalk, narrow oblong for half the length of the blade, then suddenly dilatate into a nearly reniform apiculate toothed fimbriate body, whitish-yellow, with a brown spot in the disk. On each side of the base stand three lamellas, forming thus three pairs standing at different distances from the base. Wings of column small, with teeth. —*Gardener's Chronicle*, N.S., vol. xix., p. 814.

CATASETUM SANGUINEUM (*alias* Myanthus sanguineus, *Linden*). A terrestrial Orchid, from Central America, with greenish flowers, speckled with brown or dull red. Blossoms in October and November. (Fig. 212.)

C. sanguineum; (Myanthus) sepalis petalisque oblongis acutis secundis, labello carnoso subrotundo rostrato serrato et lacero basi fimbriato foveâ altâ triangulari in medio.

This plant is not uncommon in collections under the name of *Myanthus sanguineus*, by which it has been dispersed at Mr. Linden's sales. We received the flower which furnished the annexed figure from Thomas Brocklehurst, Esq., of the Fence. Mr. William Pass, the gardener there, describes it as a strong-growing species with pseudobulbs six or seven inches long, and light glaucous green leaves. The flowers are in a close raceme, not at all handsome, notwithstanding the name, for the blood-red spots are quite dimmed by the dull green ground on which they are placed. This plant differs from *Catasetum saccatum* in having much smaller flowers, with the sepals and petals all turned upwards, the lip more lacerated than fringed, except quite at the base, and the opening of the pouch triangular without ribs, instead of being crescent-shaped with very conspicuous elevations on the side next the base.

THE MOREL BILLBERGIA.
(BILLBERGIA MORELIANA.)

[PLATE 81.]

THE MOREL BILLBERGIA.

(BILLBERGIA MORELIANA.)

A Very Fine Stove Perennial, from BRAZIL, *belonging to the Natural Order of* BROMELIADS.

Specific Character.

THE MOREL BILLBERGIA.—Leaves strap-shaped, channelled, blunt, banded with white, as long as the stem, with some spiny teeth near the base. Stem smooth, clothed with large loose petaloid distant scales. Raceme many-flowered, recurved, nearly smooth. Bracts coloured, finely scaly at the back, longer than the fascicled flowers. Sepals oblong, obtuse, mucronate, with a membranous margin, smooth, as well as the ovary. Petals revolute, much longer than the sepals. Stamens projecting far.

Billbergia Moreliana: *Adolphe Brongniart* in "*Portefeuille des Horticulteurs.*" *Revue Horticole*, iii. 82.

ONE of the most charming of the Bromeliaccous Order, and among the easiest to cultivate. Its flaming rose-coloured bracts contrast finely with the deep clear violet of the petals, and appearing on drooping racemes above a foot long, produce an unusual as well as most brilliant effect.

The species appears to be a native of Brazil. It was originally published by Prof. Adolphe Brongniart in the *Portefeuille des Horticulteurs*. Shortly afterwards it was mentioned in the *Revue Horticole* in the following terms:—

"This magnificent Bromeliad is cultivated by M. Morel, a zealous amateur, possessing the most beautiful collection of Epiphytes in Paris. In its leaves, the species which we describe reminds us of certain Tillandsias destitute of spiny teeth; but the flower-stem, turned back, branching, and furnished at the upper end with large bright rose-coloured delicate and semi-transparent bracts, covered with a white mealy powder, immediately distinguishes it. From the axil of these bracts spring the flowers, which are slightly irregular, of a pure violet colour, rendering this species one of the most beautiful ornamental plants of our hothouses. M. Morel cultivates it in baskets, hung up, and filled with peat earth covered with Lycopodium, which retains the freshness of the soil, and at the same time indicates the moisture of the house."

We find no other notice of the plant. The specimen now represented was flowered in the garden of the Horticultural Society, where it had been received from M. Keteler, of Paris, in 1848, as a fine variety of *Billbergia zebrina*. In the month of February we observed it in flower with Messrs. E. G. Henderson and Co., of the Wellington Nursery, St. John's Wood, who obtained it from M. Morel himself.

As to *Billbergia zebrina*, of which it has been supposed to be a variety, it is enough to observe that the ovaries and sepals of that plant are closely coated with white meal, and the stamens twice as long as in the plant before us, to say nothing of the leaves of *Billbergia zebrina* being spiny to their points, and the bracts by no means so richly tinted.

[PLATE 82.]

THE PURPLE GESNERA.

(GESNERA PURPUREA.)

A Noble Hothouse Tuberous Plant, of UNKNOWN ORIGIN, *belonging to* GESNERADS.

Specific Character.

THE PURPLE GESNERA.—Leaves whorled, heart-shaped, oblong, serrato-dentate, downy. Panicle somewhat whorled, with very short peduncles. Pedicels long, umbellate, hairy. Corolla with a long tube, downy, with the upper limb straight, two-lobed, almost square, the laterals rounded and much shorter.

Gesnera purpurea *of the Gardens.*

THIS very handsome plant belongs to the race of *G. Douglasii*, to which alone M. Decaisne limits the name, applying that of CORYTHROLOMA to *Gesnera striata, Sceptrum, ignea, Marchii,* and the like; ISOLOMA (the Kohleria of Regel) to *G. vestita, spicata, mollis, longifolia,* &c.; DIRCÆA to *G. bulbosa, faucialis, lateritia,* &c.; while *Gesnera pardina* and *Gardneri* form the genus HOUTTEA, *G. picta* TYDÆA, *G. allagophylla* and two more RECHSTEINERA. These, and some other minor corrections necessary for restoring order among the confused mass of plants referred to Gesnera by authors, although not exhausting the subject, render the limits of the genera better than they had previously been. With the subject of the present plate, under the name of GESNERA, are associated *G. tuberosa, cochlearis, macrostachya,* and *discolor* alias *polyantha.*

It is evident that the present species is very near *G. Douglasii* itself, although far handsomer than even the best of the varieties (?) of that species. Not only are its dimensions larger in all respects, but its flowers have a rich deep rose-colour, relieved by

the characteristic spots of *G. Douglasii*, and the leaves are deeply heart-shaped, which never happens in the latter species; scarcely even in the beautiful verticillate form figured by Sir William Hooker in the *Botanical Magazine*.

But what is the history of this *G. purpurea?* It has the tender constitution and the general aspect of the tuberous stove plants with which it is associated, requiring the very same cultivation as they do. Travellers and botanists appear, however, to have been alike unacquainted with it in a wild state. Its introduction is unknown. The name which it bears seems confined to gardens, never having been registered in works of science. For these reasons we venture to suspect it to be a mere hybrid, produced perhaps between *G. Douglasii* and *G. discolor*. At all events, it is one of the most striking of the noble race to which it belongs.

GLEANINGS AND ORIGINAL MEMORANDA.

ACER INSIGNE. The Japanese Acers which in recent years have been brought under the notice of cultivators in this country are so remarkable for their elegant and Fern-like foliage that it might have been supposed they would have been more generally grown than is the case, particularly as from their shrub-like stature they take little room, and are an undoubted feature amongst larger-leaved plants. The subject of our notice is evidently so naturally hardy that, combined with its late habit of commencing growth, it does not suffer at all from spring frosts that play such havoc with plants that come into leaf earlier. One of the principal attractions of the plant is its unusually large bright red bud-scales, which cannot fail to be effective amongst the young spring leaves of other plants. From Persia.

A tree. Branchlets rather stout, terete, dark brown; buds ovoid, stout. Leaves five to six inches in diameter, rounded-reniform in outline, palmately divided to the middle into five to seven oblong acute coarsely obtusely serrated lobes, glabrous above, beneath more or less tomentose. Flowers one-fourth of an inch in diameter, green, in terminal pyramidal panicles three or four inches long, appearing with the leaves, polygamous, the males with long slender exserted stamens, the hermaphrodite with very short stamens. Sepals ovate, obtuse. Petals hardly longer than the sepals, small, linear. Filaments quite glabrous; anthers small. Ovary hairy.—*Botanical Magazine*, 6697.

RODGERSIA PODOPHYLLA. This plant, which most likely will turn out to be hardy in this country, is in general appearance much like *Hoteia* (*Spiræa*) *japonica*, both in the character of the leaves and also of the flowers; all but the latter are somewhat more dense. If it should prove as hardy as the *Hoteia*, and has not the unfortunate habit of beginning to grow so early in the spring, through which the *Hoteia* is so susceptible of injury from frost, it will doubtless be a fine addition to our hardy out-door plants. A native of Japan.

A herb with a stout perennial root stock. Radical leaves few, long petioled, peltately five-foliolate, six to eighteen inches in diameter; leaflets sessile, five to ten inches long by three to six inches in breadth, cuneately obovate or almost deltoid to beyond the middle, then trifid, with acuminate lobes or suddenly contracted and acute, margin coarsely serrate, rather membranous, rugose from the numerous venules, glabrous above, glabrous or pubescent on the nerves beneath; petiole six to twelve inches long, stout; stipules adnate to the base of the petiole; cauline leaves few, smaller, shorter-petioled, three to five foliolate. Flowering stems two to three feet high, bearing a terminal much branched matted panicle six to twelve inches high and broad, of scorpioid pubescent cymes. Flowers one-third of an inch in diameter, shortly pedicelled, yellowish-white. Calyx-tube very short, lobes spreading, ovate acute. Petals none. Stamens twice as long as the calyx; anthers very small. Ovary depressed, globose, with two suberect styles. Capsules very small.—*Botanical Magazine*, 6691.

ODONTOGLOSSUM RUCKERIANUM SPLENDENS. A very distinct form of the handsome *O. Ruckerianum*. The plant, we understand, is in the collection of the Hon. J. Chamberlain, M.P., Highbury, Edgbaston, Birmingham. According to the following description by Professor Reichenbach it must be a very fine thing.

Surpasses by far anything I have seen of the species. The flowers are larger, the petals and sepals much broader, the blotches greater, and of the warmest mauve; the places washed with a lighter mauve are better painted and the brown blotch on the disk of the lip is of the best colour. All the colours are as pure and limpid as possible.—*Gardener's Chronicle*, N.S., vol. xx., p. 8.

BEGONIA MARTIANA. *Link* and *Otto*. A tuberous greenhouse plant, with rich rose-coloured flowers. Native of Mexico. Flowers in the summer and autumn. (Fig. 213.)

Occasionally only we find this pretty plant among collections of Begonias. It was first procured for the Royal Garden of Berlin, and published by Link & Otto, from whom we borrow the following memorandum and the annexed cut:—

"The stem is branching, round, green, from three to four feet high. The long side of the leaf is nearly three inches long, and from one to two inches broad; the short side is scarcely one inch in length or breadth; the upper surface is dark green, the lower paler and shining. The teeth sometimes have a short point in front; the petiole is round; the panicle short and bears but few flowers. From the axils of the leaves grow small bulbs. The male flowers have four red petals, of which the larger are six lines in length and breadth, and the shorter from three to four lines long, and scarcely two broad. The female flowers have five petals of very unequal size. The seed vessel is furnished with three wings, of which two are narrow and one broadish; the upper one being obtuse. This species is closely allied to *Begonia incarnata*, but the leaves are differently cut at their edges, and quite smooth without ciliæ. The panicle also has fewer flowers. The tubers of this plant were sent to us from Mexico by M. Deppe. Its beautiful flowers last from July till September. Like all Begonias it likes a light soil of vegetable mould and loam mixed with river-sand; it may be kept in summer in a protected place in the open air, or in an open greenhouse. In autumn the plant dies down, and the tuber alone remains behind, which should be kept during winter in a temperature of from 45° to 50° Fahr. in a cold house until the spring, when it should be planted out in a hotbed, where it will soon strike root and flower. The plant may be propagated in various ways: 1st, by seeds sown in pots; 2nd, by cuttings, which easily take root; 3rd, by dividing the root; and lastly, by means of the little tubers in the axils of the leaves. These fall when the branches die, and may be kept during the winter in dry earth, and be in spring placed in a hotbed, where they soon take root and come up."—*Link & Otto, Icones*, no. 25.


213

ODONTOGLOSSUM TENTACULATUM. *H. G. Reichenbach, f.* In this we have another addition to the host of natural hybrids of which there seems to be such numbers that growers of these plants had little idea of, but which nevertheless are welcome to the cultivator quite as much as if they were species. It has, we understand, appeared in the magnificent collection of Baron J. H. W. Von Schröder, The Dell, Windsor.

Intermediate between *Odontoglossum ligulare* and *rubens*, and identical with *O. Kalbreyeri*, were it not for the long tentacular bristles of the columnar wings. Sepals and petals narrow, yellow, spotted with white, without angles to

the petals. Lip whitish with a greater cinnamon disk and a few small spots of the same colour at the base, pandurate, lanceolate acute. Callous system inconspicuous as in *O. ligulare.—Gardener's Chronicle*, N.S., vol. xix., p. 814.

ACACIA COCHLEARIS. *Wendland* (*alias* Mimosa cochlearis, *Labillardière*). A handsome hardy greenhouse shrub, with balls of yellow fragrant blossoms, appearing in January and February. Native of the West Coast of New Holland. (Fig. 214.)

214

This very pretty species is one of those with the phyllodes ending in a sharp point, and the flowers in spherical heads. It is nearly allied to *A. lanigera*, from which it is distinguished by its shorter and less acuminate phyllodes, which are indistinctly marked by three (or perhaps four) parallel veins, instead of being so filled by a crowd of veins as to have a regularly striated appearance. In the cold conservatory of the Horticultural Society it is a favourite object. The late lamented Mrs. Molloy, whose death was so grievous a loss to science, in a memorandum now before us, says: "This is one of our handsomest shrubs, and renders the passing gale quite fragrant. About the Vasse River it exists in great numbers, forming thickets, intermixed with Jacksonias. It has a rich profusion of flowers, and has long wreaths and garlands, studded with their blossoms, hanging from the tree, which usually attains the stature of twelve or fourteen feet. It blossoms from September till the beginning of November, growing in black sand, and is most vigorous when there is partial moisture, as upon the banks of rivers."

ANGRÆCUM MODESTUM. In its general appearance this pretty Orchid is much like *A. bilobum*, a plant well known to Orchid growers when the Epiphytal as well as the terrestrial species within the reach of cultivators were very much fewer than at present. The species under notice differs from *A. bilobum* in its time of flowering, blooming in spring in place of late autumn or winter as in the case of *A. bilobum*. It will no doubt succeed grown on a small block of wood suspended at the cooler end of the East Indian house, kept well moistened during the growing season, and at no time allowed to remain so long in a dry state as species that form pseudo-bulbs. Its pendent racemes of pure white flowers are very elegant. A native of Madagascar.

Stem very short. Leaves distichous, three to six inches long by one to one and a half inches broad, elliptic or linear oblong, acute, tip entire, pale bright green, coriaceous, nerveless. Raceme pendulous, longer than the leaves, many-flowered; peduncle three to six inches long, rather stout, clothed with numerous very short appressed sheaths, pale brown, as are the rachis and pedicels; rachis subangularly flexuous; bracts very small, broad, appressed, brown; pedicels slender, one inch long. Flowers pure white, one to one and a half inches in diameter. Sepals and petals oblong-lanceolate, acute, spreading and recurved, the petals rather the broadest; lip rather larger than the

petals, also oblong-lanceolate, acute, recurved; spur very slender, straight, about twice as long as the pedicel. Column very small, slightly hairy; anther conical-obtuse; pedicel of the pollen-masses single, slender, with a large bilobed gland.—*Botanical Magazine*, 6393.

CENTRADENIA OVATA. *Klotzsch.* A stove herbaceous plant, found by Warczewitz in Central America. Flowers pink. Belongs to Melastomads. Introduced by Mr. Mathieu, nurseryman, Berlin.

Stem and branches between spreading and erect, four-cornered, placed in four rows, and covered with close bristle-like hairs. Leaves opposite triple-nerved, stalked, ovate, acute, bright green, smooth and shining above, with stiff bristles at the edges, pallid and downy on the veins beneath. Cymes terminal, trichotomous, many-flowered. Petals obovate, deep flesh-coloured. Sepals lanceolate acute, closely ciliated.—*Gartenzeitung*, 1851, p. 354.

CENTRADENIA DIVARICATA. *Klotzsch.* A stove herbaceous plant, found by Warczewitz in Central America. Flowers white. Belongs to Melastomads. Introduced by Mr. Mathieu, nurseryman, Berlin.

Branches long, straggling, hoary. Leaves membranous, unequal sided, stalked, long, acuminate, shortly narrowed at the base, deep green above, closely bristly near the edge, pallid on the under side, with downy veins; every other one small and persistent. Flowers few, terminal. Petals white, obovate. Sepals short, ciliated.—*Gartenzeitung*, 1851, p. 354.

CALANTHE FÖRSTERMANNI. *H. G. Reichenbach, f.* New species of Calanthe do not make their appearance so often as many genera of Orchids. The plant under notice would seem by the description to be distinct in appearance. It will no doubt be found to thrive under conditions such as answer for the warmer section of Orchids indigenous to warm regions of the Eastern hemisphere.

A large-leaved Calanthe, collected on the limits of Burmah and China. It has a rich inflorescence of yellow flowers; sepals and petals oblong acute; lip whitish-yellow, reniform, with an apiculus; spur clavate, half the length of the stalked ovary; bracts exceeding the flowers, rather thin. The colours are given on the authority of the collector Mr. Förstermann.—*Gardener's Chronicle*, N.S., vol. xix., p. 814.

ONCIDIUM SCHLIMII. *Linden.* A tall rambling Orchidaceous Epiphyte, from Central America. Flowers yellow and brown in November. Introduced by Mr. Linden.

O. Schlimii; (Plurituberculata) foliis binis rectis ensiformibus, scapo subscandente racemoso-paniculato racemis flexuosis, labello, bilobo, rotundato basi angustiore auriculato cristæ tuberculis quatèr ternis, columnæ alis triangularibus utrinque acuminatissimis.

We received flowers of this plant from the Fence near Macclesfield, where it had produced a scape five feet long. It had been purchased by Mr. Brocklehurst at one of Mr. Linden's sales. From dried specimens in our herbarium, collected for Mr. Linden, we learn that it had been found by Funck and Schlim on the 7th of October, 1846, in the province of Merida, at the height of 7,000 feet above the sea. The pseudo-bulbs are narrow, and bear a pair of sword-shaped thin leaves, from six to nine inches long. The panicle is wavy, weak, and inclined to scramble, and bears, at intervals of about two and a half inches each, short racemes or imperfect panicles, not longer than the intervals themselves. The flowers are rather smaller than in *Oncidium reflexum*, near which the species will stand; they are bright yellow, slightly and irregularly barred with brown. The peculiar form of the wings of the column—triangular, with the two free ends much acuminated and standing higher than the anther itself—renders it easy to identify the species.

THE MAURANDIA CYMBOID.
CYMBIDIUM MAURANDIÆ

[PLATE 83.]

THE MASTERS CYMBID.

(CYMBIDIUM MASTERSII.)

A Handsome Terrestrial Orchid, from the EAST INDIES.

Specific Character.

THE MASTERS CYMBID.—Leaves distichous, narrowly sword-shaped, obtuse. Peduncle erect, closely covered with herbaceous equitant sharp-pointed scales. Spike short, few-flowered, plunged within the scales. Sepals and petals linear-oblong, blunt. Lip obovate, three-lobed, downy inside; with the ridges continuous, confluent at the points, and sometimes expanded into a three-lobed tubercle; the middle segment oblong, wavy, lobed, those at the side blunt and flat.

Cymbidium Mastersii: *Griffith in Hort. Bot. Calcutta; Loddiges' Catalogue,* No. 1233; *Lindley in Botanical Register,* 1845, t. 50.

WHEN this was published in the *Botanical Register* some years ago, nothing could be said about it except that it was received from the East Indies by Messrs. Loddiges in the year 1841, and blossomed in December, 1844; that it is a very distinct species, with snow-white flowers, sweet-scented, having the fragrance of almonds; and that its erect flower-stalk, closely covered with long green sharp-pointed equitant imbricated sheaths, is quite unlike that of any other species. It was understood to have been named by Griffith after Mr. Masters, one of the principal assistants in the Botanical Garden, Calcutta.

Since that period it has continued to appear occasionally in collections, but remains a comparatively rare plant. The specimen now figured, if compared with the original plate in the *Botanical Register,* will show what cultivation has been able to do for it.

It is undoubtedly a genuine Cymbidium, as is shown by the two parallel plates on its lip, and the short somewhat transverse gland of the pollen masses. One of its nearest affinities is *C. elegans*, another species from the continent of India.

Although the species of this genus are capable of growing upon the bark of trees, and the Aloe-leaved was one of the very few which was able to endure the ill-treatment of gardeners before 1822, yet they are much more advantageously regarded as terrestrial plants. They should all be grown in pots, in thoroughly-drained lumps of peat, into which their long roots can penetrate, roasted in summer, but well watered and kept in an atmosphere saturated with humidity, but continually in motion while they are making their growth, after which they should be gradually dried off again.

THE THYRSE-LIKE BILLBERGIA.
(BILLBERGIA THYRSOIDEA.)

[PLATE 84.]

THE THYRSE-LIKE BILLBERGIA.

(BILLBERGIA THRYSOIDEA.)

A Stove Perennial, from BRAZIL, *with Rich Crimson Bracts, arranged in a Cone, belonging to* BROMELIADS.

Specific Character.

THE THYRSE-LIKE BILLBERGIA.—Leaves erect, broadly strap-shaped, obtuse with a point, uniformly concave, spiny-toothed, about as long as the scape. Bracts ovato-lanceolate, acuminate, collected into a cone or spike like a thyrse in form. Calyx covered with white mealiness. Petals obtuse, much longer than the calyx.

Billbergia thyrsoidea: *Martius in Römer and Schultes Sp. Plant.*, 7, 1261.

A PLANT with the manner of growth and appearance of a Pine Apple, except that the leaves are wholly destitute of a mealy or glaucous covering, but are a clear bright green. Leaves loosely arranged, rather wavy, with small prickly serratures, and a short abrupt point. Bracts rich crimson, very regularly arranged in an oblong obtuse cone, or thyrse, not mealy. Flowers rather larger than the bracts, and of nearly the same colour. Sepals oblong, obtuse, smooth, much shorter than the closed-up straight erect petals. Stamens six; three free, and opposite the sepals; three united to about the middle of the petals, which have at the base a pair of half ovate scales, the outer edge of which is coarsely toothed. Ovary covered with a fine white loose mealiness, which is composed of minute oval loose cells filled with air; three-celled, with numerous anatropal ovules having an elevated raphe, a crested chalaza, and a large secundine projecting beyond the orifice of the primine; the stigmas are three, and convolute.

Such are the characteristic marks of this very beautiful stove plant, originally found by Martius on rocks near Rio Janeiro, and imported by M. de Jonghe of Brussels. For the opportunity of figuring it we are indebted to Mr. Henderson, of the Wellington Nursery, St. John's Wood. It requires to be managed in the same way as a Pine Apple.

It is most nearly allied to the Pyramidal Billbergia figured in the *Botanical Magazine*, t. 1732, and in the *Botanical Register*, t. 203 and 1181; but that plant has glaucous taper-pointed leaves, and very large spreading flowers, conspicuous for the white mealiness of the calyx.

GLEANINGS AND ORIGINAL MEMORANDA.

CATTLEYA SCHRÖDERIANA. *H. G. Reichenbach, f.* This fine Cattleya has been named by Professor Reichenbach after Baron J. H. W. Von Schröder, The Dell, Egham, in whose splendid collection of Orchids it flowered during the summer of 1883. In appearance the plant is much like *C. bulbosa*, and when not in flower might be taken for that handsome and distinct-looking species. It is an acceptable addition to the section of Cattleyas to which it belongs, of which *C. dolosa* is another handsome kind. Professor Reichenbach thus describes it:—

Bulb nearly four inches high, with two distinct and distant joints within, furrowed, nearly equally thin, not at all thick, two-leaved. Leaves very stout, oblongo-ligulate acute, four inches by one and a half inches. Peduncle two-flowered. Ovaries light purple with dark spots. Sepals ligulate acute. Petals oblong acuminate, broad. The lip has the smallest basilar auricles possible, and a long unequal claw, ending in a transverse oblong apiculate blade. Whole flower fine saturate purple, with a mauve hue, equalling that of a good *Lælia majalis*. Column narrow, though stout, light purple, with a white dorsal line, not at all boat-shaped, as in the species just named.—*Gardener's Chronicle*, N.S., vol. xx., p. 102.

SAXIFRAGA MARGINATA. In this Saxifraga we have another addition to these favourite Alpines now deservedly so popular with the lovers of hardy flowers. The plant, we understand, bloomed at Kew in March, 1883, and from the account of it which appeared in the *Botanical Magazine* it is found on the mountains near Minori. Like others from the same region it will no doubt succeed best in free open soil, well drained, such as may be secured when grown on rockwork.

Densely tufted; shoots perennial, hard. Leaves radical, glabrous, forming rosettes one-half to one inch in diameter, densely coriaceous, cuneate obovate, obtuse, not keeled below, ciliate at the base, margin and tip cartilaginous, and marked with a series of pits covered with a white calcareous incrustation. Flowering stems two to four inches high, stout, glandular-pubescent, laxly clothed with erect appressed linear obtuse glandular-pubescent cauline leaves. Flowers corymbose, shortly pedicelled, one-half to three-quarters of an inch in diameter; pedicels and calyces clothed with black glandular hairs. Calyx campanulate, cleft to the middle, lobes ovate acute. Petals obovate, five to seven nerved, spreading and recurved, white. Stamens much shorter than the petals, filaments subulate, styles conical, stout, erect, stigmas terminal. Capsule broadly ovoid.—*Botanical Magazine*, 6702.

LYCASTE SMEEANA. *H. G. Reichenbach, f.* This seems to be another of the natural hybrids of which so many have appeared of late years, and which, beyond whatever individual beauty they possess, are highly interesting in going far to upset the preconceived ideas about many new Orchids that have been introduced really being species. The plant under notice may be taken as a descendant of *L. Deppei*,

an old favourite species that has been nearly fifty years in the country, and the beautiful *L. Skinnerii* of later introduction. It flowered with Mr. A. H. Smee, The Grange, Hackbridge, Surrey, and is named in compliment to its possessor. Mr. Smee's gardener, Mr. Cummings, exhibited a plant at one of the Royal Horticultural Society's meetings in the autumn of 1883 which fully bore out Professor Reichenbach's description of it as being a pretty kind.

It has the bract of *Lycaste Deppei*, and nearly the shape of its flower, though it is wider, but the colour is white, excepting the lip, which has a light purple border of the triangular acute undulate anterior lacinia, rows of small purple stripes, and spots over the whole surface. The callus is nearly as in *Lycaste Deppei*, having a very short free portion, not a long one, as in *Lycaste Skinnerii*, and an obscure keel on its middle. The petals, too, have on the inside some purple spots. The column is white, with some purple spots at the base. Those who know *Lycaste Deppei* and *L. Skinnerii* will suggest its being intermediate between them. The bulb and growth are described as being in the way of those of *Lycaste Deppei*, while the column, the shape of the petals, the sepals, and lip remind one of *Lycaste Skinnerii* and *Deppei.—Gardener's Chronicle*, N.S., vol. xx., p. 198.

NICOTIANA ALATA. *Link* and *Otto* (*alias*? N. decurrens, *Agardh; alias*? N. persica, *Lindley*). A handsome tender annual, with fragrant white and green flowers. Native of South Brazil. Belongs to Nightshades. (Fig. 215.)

We translate literally the account given of this plant by Link and Otto. "The stem is from four to five feet in height, branching, with distant, glandular hairs. The leaves are from three to four or more inches long, and from one to two inches broad; the upper ones are smaller; they are all decurrent and form narrow wings on the stem, obtuse and with a small callous point, but a little repand at the edges and toothed, the teeth having also little callous points, on both sides rough with small somewhat closely pressed hairs, and at the edges furnished with distant and glandular hairs. The flowers are placed rather far apart from each other on a raceme; the lower pedicels are one inch long, the upper ones are shorter. The rough calyx is not quite an inch in length, tubular; its teeth are long and very narrow. The flowers are white and sweet-scented; the tube from two to three inches long, a little expanding at the top; the teeth of the limb, eight lines in length, are oval, somewhat expanded, obtuse. Stamens as long as the tube. Style somewhat longer. Capsules oblong. The seeds of this plant were sent by M. Sello in 1827 from Brazil. They should be sown in the spring in pots, and the seedlings should be planted out in the open ground when the frosts are gone. The plant is hardy and may be kept in winter in a temperature of from 38° to 43° Fahr., and as such plants as are strongest flower best and produce most seeds, they should be so treated. The soil should be light, but rich and mixed with sand. The large white odoriferous flowers, forming nice-looking tufts, render the plant suitable for bedding out. The flowers close in the day-time and hang down, but open at night. If the weather is cloudy they open as early as five P.M., but if clear not before six and a half P.M.; in like manner they shut in the morning at six if the weather be clear, but not before seven if it be overcast."

Such is the account given by Link & Otto of a plant which we think is beyond all doubt what Sir Henry Willock found cultivated in Persia and sent to England as the source of Shiraz Tobacco; in consequence of which it was called *N. persica* by one of us, and, according to M. Walpers, *N. decurrens*, by Bishop Agardh. We must, however, observe that the Persian plant was not observed to be a perennial; nor do the leaves appear to have been so distinctly decurrent as is represented in the accompanying figure: but the specimens which have been preserved show that the leaves were somewhat decurrent, even near the summit of the flowering stem. This identification of plants supposed to be distinct leads to the inquiry of how a South Brazilian plant came to be cultivated in Persia as Tobacco? and also whether any Brazilian Tobacco is manufactured from it? We trust that some one will be able to answer these questions, as well as many others connected with the history of commercial Tobacco; as, for instance, is any Havannah Tobacco prepared from *N. amplexicaulis*, as George Don reported? Is the white-flowered Guatemala Tobacco a species distinct from the Red Virginian, *N. Tabacum*? Are the red-flowered Tobaccos all varieties of *N. Tabacum*? or do they belong to different species, as some pretend? What yields the pitchy Tobacco of Latakia: or the mild Tobacco of Syria? The Djebelé seems to belong to *N. Tabacum*. Is it true that *N. paniculata* is cultivated in the East? How came *N. rustica* to be grown in Egypt and Tunis, where it produces the fragrant but strong Tombaki Tobacco, which was shown at the Great Exhibition of all Nations? Of what country is *N. rustica* certainly a native? All these are interesting questions, to not one of which we believe can a *satisfactory* answer be found in books.

GRAELLSIA SAXIFRAGÆ-FOLIA. *Boissier* (*alias* Cochlearia saxifragæfolia, *De Cand.*). A hardy herbaceous plant, with white flowers. Belongs to Crucifers. Native of the mountains of Persia.

This is a little plant with long, kidney-shaped or roundish leaves, very coarsely notched, and smelling strongly of garlic. The flower-stems are about nine inches high, and bear a compound corymb of small white flowers resembling

those of the common scurvy-grass. It is a hardy perennial, growing freely in any good rich garden soil, and well suited for planting on rockwork. It flowers in July and August, and is easily increased by dividing the old plants in autumn or spring, or by seeds; the plants raised from seed will not flower before the second season. It must be considered a good hardy plant for rockwork, and rather showy, as it flowers abundantly.—*Journal of Horticultural Society*, vol. i.

CRINUM HILDEBRANDTII. A distinct-looking species of these handsome flowering plants. Like others of the genus, the flowers have an elegant appearance, the purple filaments affording a nice contrast in colour to the white perianth. It will require a warm stove to grow it satisfactorily. Introduced from the Comoro Islands.

Bulb ovoid. Leaves eight or ten, contemporary with the flowers, lanceolate, bright green, firm in texture, a foot and a half or two feet long, quite glabrous on the margins. Pedicel slender, lateral, ancipitous, about a foot long; umbel of six to ten nearly or quite sessile flowers; spathe-valves two, lanceolate, reflexed. Perianth pure white, erect, with a cylindrical tube six or seven inches long; segments of the limb lanceolate, spreading horizontally when fully expanded, two or three inches long, under half an inch broad. Filaments bright purple, shorter than the perianth-segments; anthers linear, three-quarters of an inch long. Style exserted beyond the perianth-segments; stigma capitate.—*Botanical Magazine*, 6709.

GALEANDRA DEVONIANA. *Lindley*. A handsome terrestrial Orchid, from tropical America. Flowers cream-coloured and brown.

This was first detected by Schomburgk on the Rio Negro, a river which discharges itself into the Amazon; and Mr. Spruce has been so fortunate as to meet with it in the same locality, and we received a Wardian case from him containing the flowering specimen in excellent condition which we here represent. Schomburgk saw it growing five to six feet high, and in clusters or patches from ten to twelve feet in circumference. Stems uniform to the base (no pseudo-bulbs), clustered, three to five or six feet high, scaly below, leafy above: leaves much sheathing at the base, linear-ensiform, acuminated, striated, glabrous, membranaceous. Panicle terminal, with few but large flowers; branches and peduncles bracteated. Sepals and petals spreading and slightly ascending, lanceolate, striated, darkish purple, green at the margin and at the base externally. Lip very large, projecting, white, tipped and streaked with purple, broadly obovate, obscurely three-lobed, the sides meeting so as to form a lax tube around the column, intermediate or spreading, deflexed, retuse: near the base within are four lamellæ. Column within the tube-like portion of the labellum, slightly winged at the margin. Anther with a large, downy, erect crest. This is a tropical terrestrial Orchid, and therefore requires to be kept in a warm stove or Orchideous house. It may be potted in turfy peat-soil made rather firm in the pot, and well drained. In winter it must be so placed as not to suffer from excess of moisture, either in the atmosphere or in the soil.—*Botanical Magazine*, t. 4610.

COREOPSIS FILIFOLIA. *Hooker.* A handsome hardy annual, with bright yellow flowers. Native of Texas. Belongs to Composites. (Fig. 216.)


216

Introduced to this country by the late Mr. Drummond. The stems grow about three feet high, and bear a profusion of rich golden-yellow flowers with a crimson disk. "Of all the narrow and divided-leaved species of Coreopsis," says Sir William Hooker, "this has unquestionably the narrowest foliage, and which, if examined carefully, exhibits the most fleshy texture, the under side semiterete and presenting no appearance of a nerve or costa, which indeed is only indicated on the upper side by the presence of a furrow. Its nearest ally is perhaps *C. tenuifolia*; but there, besides the difference in foliage, the disk is described as being of the same colour as the ray, and the florets of the ray much narrower."

POTENTILLA AMBIGUA. *Cambessèdes.* A handsome prostrate perennial, with fine yellow flowers. Native of the Himalaya. Belongs to Roseworts. Introduced at Kew.

A well-marked, hardy, Himalayan species of Potentilla, with a compact habit and large yellow flowers, produced abundantly during the summer months. Jacquemont detected it in fissures of rocks in Kanaor, near Rogui, elev. 9,000 feet, in about lat. 32°, long. E. 78½°, where it was likewise found by Capt. Henry Strachey; thence it appears to extend eastward through Nepal to Sikkim-Himalaya, where it was found by Dr. Hooker in woods at an elevation of from 12—13,000 feet above the level of the sea. Its nearest affinity is with *P. eriocarpa*, Wall.; but there the stem is scarcely leafy, and the leaflets are longer and much more divided. From a woody perennial root, many closely-placed stems diverge: they are ascending, six inches to a foot long, frequently purple, leafy, clothed with soft silky hairs, as is, more or less, every part of the plant. Leaves on longish petioles (which have two large, ovate usually entire stipules at the base), ternate; leaflets cuneato-obovate, trifid at the apex, of a firmish texture, glaucous beneath, the lateral ones sessile, the terminal one on a short petiolule. Peduncles slender, terminal, single-flowered. Flowers large, yellow. Calyx with five large obovate, spreading bracteas, glaucous beneath, entire.

Petals large, rather obcordate than obovate. A native of the elevated regions of the Himalaya. It is a free-growing species, increasing rapidly by its stoloniferous roots, and soon forming a large patch. It continues to flower until late in the autumn.—*Botanical Magazine*, t. 4613.

VACCINIUM ROLLISONI. *Hooker.* An evergreen greenhouse bush, with red flowers and short blunt leaves. Native of Java. Introduced by Messrs. Rollison.

From the collection of Messrs. Rollison, Tooting. Introduced by their collector, who found it growing on the lava of the "silent volcanoes" of Java, on the highest land in the island. We have specimens of the same from Salak mountain, Java, from Mr. Thomas Lobb. It forms a handsome evergreen bush, with glossy box-like leaves, and what is wanted in the number of flowers is compensated by their beauty of colour. It does not appear to be anywhere described, either under Vaccinium or Agapetes. It is not *Agapetes microphylla*, Junghuns, for that has leaves three to four inches long. Requires to be treated as a greenhouse plant. In the summer it may be placed in the open air in a shady place. Like the rest of this tribe of plants, it thrives in light sandy peat-soil, and is readily increased by cuttings. —*Botanical Magazine*, t. 4612.

CHÆNOSTOMA LINIFOLIUM. *Bentham* (*alias* Manulea linifolia, *Thunberg; alias* Chænostoma fasciculatum *of Gardens*). A beautiful little shrub, with long white flowers having a yellow orifice. Belongs to Linariads. Native of the Cape of Good Hope. (Fig. 217.)

We think there can be no doubt that the *Ch. fasciculatum* of Gardens is identical with *Ch. linifolium*, notwithstanding that its flowers are much longer and more loosely arranged than they are found in the stunted specimens preserved in herbaria. It may be regarded as a form of that plant, with all the parts drawn out by exuberant growth. It forms a neat, dwarf, compact bush, with narrow leaves, which are sometimes bluntly toothed, and long loose racemes of tubular white flowers, orange-yellow at the mouth, beyond which the yellow anthers project. It blossoms late in the autumn, or early in winter, according to the treatment it receives. A mixture of peat, loam, and sand suits it perfectly. When out of flower, it should be allowed to complete its growth, and then be rested for three or four months. It must have abundance of air at all times. Cuttings multiply it readily. It may also be treated like a tender annual; in this respect resembling such plants as Mignonette, which are really undershrubs, although flowering the first year.

CALODRACON NOBILIS. *Planchon.* (*alias* Calodracon Sicboldii *Planchon; alias* Dracæna nobilis *Van Houtte.*) A hothouse plant with a graceful but noble habit, and rich purple and crimson leaves. Native of Japan. Belongs to Lilyworts.

This plant, already known in gardens under the name of *Dracæna nobilis*, resembles the *Calodracon Jacquini* of Planchon (*Drac. ferrea* and *terminalis* of books), and is remarkable for the singularly vivid mixture of streaks of rich crimson and purple in its foliage. It is said to be more dwarf than the last species, and far more attractive. "Entre mille plantes d'une serre, c'est sur elle que se portent d'abord les regards; dans un salon, c'est l'ornement le plus exquis que la nature puisse prêter au raffinement de luxe;" such is the flowery language in which M. Planchon speaks

of it in Van Houtte's *Flore des Serres*, where there is an excellent figure of the species. The stem is described as being so short as to be almost concealed by the head of leaves; nothing, it is added, can be more beautiful, either in the stove itself, or in a vase in a sitting-room warm enough to keep it in health, and sufficiently lighted.

COMMELYNA SCABRA. *Bentham.* A half-hardy perennial plant, with glaucous wavy leaves, and large dull purplish brown flowers. Native of Mexico. Belongs to the Order of Spiderworts. Introduced by M. Allardt of Berlin. (Fig. 218.)

218

A very singular herbaceous plant, first found by Mr. Ehrenberz in the North of Mexico, and afterwards by Hartweg. It forms a tuft of straggling stems variegated with red. The leaves are sessile, lanceolate, stiff, cartilaginous at the edge, covered all over with fine asperities, with purplish sheaths fringed at the orifice. The spathes are almost cordate, folded together, downy, with five to ten flowers in each. The petals are of a singularly dull purplish brown colour.—*Link, Klotzsch and Otto, Icones*, t. 30. This does very well in a warm border out of doors in the summer, but as it dislikes wet and cold, its roots must be taken up in the autumn and kept dry over the winter. It requires a light rich garden soil.

GRINDELIA GRANDIFLORA. *Hooker.* A hardy biennial, with large showy orange-coloured flower-heads. Native of Texas. Belongs to Composites. Introduced at Kew.

Raised from seeds sent by Dr. Wright from Texas, and quite hardy, flowering in the open air as late as November 1st, when our drawing was made. In foliage the species certainly more closely resembles *G. inuloides*, Bot. Reg. t. 248, than *G. squarrosa*, figured in *Botanical Magazine*, t. 1706, but it appears on comparison distinct from both, especially in the great size of the flowers (capitula) and in the deep orange-yellow of the broad ray, no less than in the great height of the plant, three to five feet in our garden. It must be confessed, however, that the species of the genus are very variable and ill-defined. Stems, on an average, four feet high, erect, herbaceous, simple till towards the summit, where they are corymbosely branched, each branch leafy and terminated by a flower. Whole plant hard and rigid, sub-glaucous. Leaves alternate, sessile, from a broad cordato-semiamplexicaul base, lanceolate, gradually tapering to a point; the base coarsely dentato-serrate, the rest nearly entire. Flowers (capitula) very large, solitary, on each terminal branch, full orange-yellow. Involucre hemispherical, glutinous: scales subulate, spreading or even recurved, squarrose, herbaceous. Radical florets ligulate, very long, with a slender tubular base. Ovary obovate, furrowed, bearing one or more setæ: style with the branches subulate. Florets of the disc tubular, five-toothed, of the ovary, as in the ray, setæ three to six. A stout plant, making a showy appearance when in flower. Towards autumn the stem becomes hard and woody; after flowering, the stem and roots are exhausted and die, showing that the plant is only a biennial. Like many Mexican Compositæ, it does not freely ripen seeds; but it may be readily increased by cuttings, which should be struck so as to have them established by the end of the summer, the young plants being kept in a cool airy place till the spring, when they may be planted out in the flower-borders.—*Bot. Mag.*, t. 4628.

MASDEVALLIA CALURA. *H. G. Reichenbach, f.* An attractive plant, though not equal from the ordinary cultivator's point of view to many of the grand species that this distinct beautiful genus is composed of, nevertheless it is interesting.

The outer perigone has a nearly obliterate chin, the cupola is well developed, the single triangle is very short, the lateral triangles are much larger, all of a fine bluish purple, nearly of the tint of *Masdevallia cucullata*. The tails surpass the length of the floral body. The inner surface is covered with obtuse warts. The petals and lip are brownish-purple and quite distinct in shape; the petals very broad and plump, with a very short stalk and irregular blunt angles and a marginal obscure keel inside. The base of the lip is very broad, nearly rhomboid, the anterior part narrower and abruptly acute. This is quite distinct from what occurs in *M. marginella*. Column white with numerous purple freckles on the anterior base. The leaves are very thick and very distinctly stalked. The plant is rather nice, though not grand.—*Gardener's Chronicle*, N.S., vol. xx., p. 230.

CALCEOLARIA STRICTA. *Humboldt* and *Bonpland*. A handsome half-hardy shrub from Peru. Flowers pale yellow, appearing in September. Introduced by Messrs. Veitch and Co. (Fig. 219.)

219

This is another of those valuable, shrubby, willow-leaved Calceolarias which, independently of their intrinsic merit, will become so important as breeders. It is nearly related to the *C. tetragona* mentioned by us (p. 87, vol. ii., Fig. 160); but differs in the form of the leaves, the size and colour of the flowers, and the proportion of the calyx. This species forms a small smooth bush, with willow-like leaves, pallid beneath, finely toothletted on the edge. The flowers are pale yellow, with the upper lip of the corolla much smaller than the lower, and rather distinctly crenated at the angle where its edges curve inwards. The calyx is very much shorter. It seems to be a very common Peruvian plant. We saw it growing in Messrs. Veitch's nursery in the open air, and flowering in great beauty. No doubt it should be planted out in the summer, in light friable soil, and removed to a conservatory in winter. Mr. Wm. Lobb, who found it near Loxa, describes it as a shrub from two to three feet high.

WARSCEWICZELLA PICTA. This appears to be a curious species of the singular Warscewiczellas, a remarkable set of Orchids worth growing on account of their distinct appearance.

Much in the way of *Warscewiczella discolor*, but much rarer, and very curious. Its chief difference

consists in the lip. The tablet-like greenish basilar callus has two teeth in front, and a few parallel ones on the sides. The rhomboid blunt acute much crisped lacinia of the lip is yellowish-white, with very numerous marginal deep purple broad lines, and a brownish border on each side of the base. Petals white, sepals pale greenish or yellowish-white. Column whitish, with some dark spots on the base.—*Gardener's Chronicle*, N.S., vol. xx., p. 8.

NYMPHÆA SCUTIFOLIA. *De Candolle* (*alias* N. capensis, *Thunberg*). A most beautiful hot house aquatic, with large blue flowers. Native of the Cape of Good Hope. (Fig. 220.)

We have two blue Nymphæas in cultivation, both called *N. cærulea*. Of them, one, which is very common, is a native of the Nile, and has leaves without indentations, and small flowers: the other, found at the Cape of Good Hope, has flowers four times as large, with four times as many petals and stamens, and leaves with coarse indentations at the edge; this is as much more rare as it is more beautiful; it is sometimes called *N. cyanea* in gardens. Concerning the wild habits of the last, now figured after a beautiful design in Van Houtte's *Flore des Serres et des Jardins*, we have little information; Dr. Harvey says it is the only Cape water-lily, and is found in various parts of the colony; Thunberg gives the streams at Lange Kloof. It is by far the handsomest blue water lily that we possess.

220

THE ROSY LIMATODE.
(LIMATODES ROSEA.)

[PLATE 85.]

THE ROSY LIMATODE.

(LIMATODES ROSEA.)

A Most Beautiful Terrestrial Hothouse ORCHID *from the* EAST INDIES.

Specific Character.

THE ROSY **LIMATODE.—Pseudobulbs fusiform. Leaves oblong-lanceolate, plaited, smooth. Scape many-flowered, longer than the leaves, shaggy, as well as the loosely placed flowers. Bracts membranous, curved backwards, shorter than the ovary. Lip oblong, flat, retuse. Spur straight, blunt, horizontal. Column dwarf, downy.**

THE genus Limatodes was at one time only known to the public exclusively by a figure in the plates belonging to Blume's *Bijdragen*, and the scanty accompanying letterpress. The species there mentioned, *L. pauciflora*, a native of dense woods on Mount Salak in Java, is described as a fibrous-rooted terrestrial plant having stems swollen at the base, broadly lanceolate membranous ribbed leaves, lateral solitary few-flowered peduncles (by which we understand scapes), and white blossoms. The figure shows it to be a genus very nearly allied to Calanthe, from which it differs in having the lip perfectly free from the column, instead of being united with it. It also appears to have a column much elongated, while that of Calanthe is in general particularly short; but such a difference is unimportant, because *Calanthe densiflora* has also a very long column, and the discovery of the present species with a very short column still further destroys any value which the character alluded to may have been supposed to possess.

It was near Moulmein, in the province of Martaban, that this brilliant species was discovered by Mr. Thomas Lobb, and sent to Messrs. Veitch, with whom it flowered. In all respects it has the habit of a Calanthe, but the pseudobulbs are long and fusiform. The stem and flowers are covered with long hairs like *Calanthe vestita*. The latter are scentless, deep rose-coloured, with an oblong undivided lip, marked at the base of the expanded part with a deep red ring, but destitute of certain callosities remarked by Blume in his original species; at the base it is rolled up like a Cattleya, and embraces an extremely short pink downy column. For the convenience of our more scientific readers, the following transcript is added of notes made at the time of examining the plant: —

Labellum omnino læve, ungue circa columnam nanam convoluto, eique denique per spatium minimum adnato, haud vestigium callositatis aut appendicis cujuscunque. Anthera apice bilobo, valdè gibbosa, 8-locularis. Pollinia 8, per filum pulvereum colligata. Rostellum bilobum, lobis rotundis prominentibus. Glandula minuta, à rostello vix separabilis.

This species flowers most abundantly, and the pseudobulbs invariably have the peculiarity of producing a kind of neck about their middle.

A third species of this genus was found on the lower ranges of the Mishmee hills by Griffith, from whom we have a dried specimen. It produces a leafy stem from two to three feet high, bearing five or six broad acuminate leaves. The flowers are few in number, at the extremity of a smooth and rather weak scape. They are somewhat larger than in *L. rosea*, with a curved spur and an obovate four-lobed lip; their colour is unknown. Of these three species the following may be the present arrangement:—

* *Column elongated.*

1. *L. pauciflora* (Blume Bijdragen, 375, t. 72); floribus glabris, calcare recto, labello oblongo retuso apiculato basi bicalloso.—*Java, on Mount Salak.*

2. *L. mishmensis;* floribus glabris, calcare incurvo, labello obovato nudo obtuso apice 4-lobo.—*Mishmee* Hills Griffith.

* * *Column very dwarf.*

3. *L. rosea* (Lindley in Paxton's Magazine, t. 85); floribus villosis, calcare recto horizontali, labello oblongo obtuso nudo.—*Moulmein.*

So many species of CALANTHE, the genus nearest to Limatodes, are now in Gardens, the others are so easily procurable, and all are so very handsome, that we cannot do better than occupy a vacant space with an enumeration of such as have yet been named, distinguishing by a * those which are not yet known to be in cultivation. Three sections may be conveniently formed among them:—

* *Lip spurless or nearly so.*

* † 1. C. puberula *Lindley.*—Mountains of Sylhet, where it seems to be common. Khasiya Hills (*Griffith*, no. 494).

* 2. C. gracilis *Lindley.*—Same situations as the last.

* † 3. C. tricarinata *Lindley.*—Nepal.

* † 4. C. brevicornu *Lindley.*—Nepal.

5. C. abbreviata *Lindley.*—Java; near the cataracts of the river Tjikundul, in the mountainous parts of Gede.

* * *Lip with a long spur;* column much elongated.

6. C. densiflora *Lindley.*—Mountains of Sylhet.

* * * *Lip with a long spur;* column very short.

* 7. C. clavata *Lindley.*—Mountains of Sylhet. Khasiya Hills (*Griffith*).

8. C. angustifolia *Lindley.*—Shady mountainous places in Java, in the province of Buitenzorg (*Lobb*, 221).

9. C. curculigoides *Wallich.*—Penang and Singapore.

10. C. bicolor *Lindley.*—Japan.

* 11. C. striata *R. Brown.* (*alias* Limodorum striatum *Ic. Kæmpf.*, t. 2).—Japan.—Possibly this may be the same as the last, notwithstanding some apparent discrepancies.

* 12. *C. Griffithii;* racemo laxo multifloro, ovario tomentoso, labelli lobis lateralibus linearibus obtusis intermedio subrotundo truncato denticulato sub apice dente unico magno aucto, calcare recto pendulo pubescente.—Bootan, above Telagong; also no. 33; also "to Chuka on wet banks, 6000 feet. Per. explanat. * * ringens."—*Griffith.*

13. C. vestita *Wallich.* (*alias* Cytheris Griffithii *Wight ic.* t. 1751-2)—Burmese Empire, Mergui, Tavoy.

14. C. plantaginea *Lindley.*—Nepal and Kemaon. Bootan, between Tussulling and Chindrippa (*Griffith*, 877).

15. C. discolor *Lindley.*—Japan? Java?

16. C. parviflora; scapo gracili multifloro pubescente, bracteis reflexis, labelli lobis lateralibus ovatis intermedio bilobo obtuso divaricato usque ad basin verrucoso, calcare glabro fusiformi pendulo sepalorum longitudine.—Java (*Lobb*, 334).

17. C. versicolor *Lindley.*—Some part of the East Indies. Locality uncertain.

18. C. Masuca *Lindley.*—Nepal.

19. C. purpurea *Lindley.*—Ceylon.—Known from the last by its leaves being downy on the under side.

20. C. furcata *Bateman.*—Philippines.

21. C. veratrifolia *R. Brown.*—Indian Archipelago, &c.—[Var. B; australis *Hort.*—New Holland.]

22. C. sylvatica *Lindley.*—Mascaren Islands.—[*Var. B; natalensis *Reichenb. f. in Linnæa*, 19. 374.—Port Natal.]

Obscure species of sect. * * *.

* C. comosa *Reichenb. f. in Linnæa*, 19. 374.—Nilgherries.

* C. pulchra *Lindley.*—Java; in woods on the mountains of Seribu.—Flowers pale orange.

* C. speciosa *Lindley.*—Java; in the deep mountain woods of the provinces of Bantam and Buitenzorg.—Flowers orange-coloured.

* C. emarginata *Lindley.*—Java; in the primæval woods of Mount Gede.—Flowers violet, with orange-coloured callosities on the lip.

What is the STYLOGLOSSUM of Kuhl and Hasselt, whose work on Orchids is to us completely unknown, and which is referred hither by Endlicher?

And what can the following possibly be?

Calanthe mexicana *G. Rekb. fil. in Linnæa*, 18. 406; scapo erecto foliis latis oblongis acuminatis breviore s. æquali multifloro, bracteis lanceolatis ovariis longioribus, sepalis petalisque minoribus oblongis obtusiu-culis, labello ovato obtuso integerrimo puberulo calcarato, calcare tenui ovario breviore.

"This plant grows to the height of six or seven inches. The base of the stem is covered with several leafy sheaths. Leaves, oblong, very finely pointed, extending beyond the stem, or the same length. The three outer calyx leaves oblong, four lines long, one broad, the two inner three lines long, one line broad, perfectly white. Lip longish, oval, blunt at the point, appearing darker coloured, covered with numerous little short hairs. Spur very weak, pointed, somewhat shorter than the ovary. Column short, cut quite round at the edge. Anther at the lower end heart-shaped and notched. Pollen masses eight, and remarkably short for a Calanthe.—Temperate Mexico.—*Leibold.*"

We repeat it, all these plants are eminently deserving of cultivation, and those which are not

in England should be diligently sought for by persons living where they are found. As an encouragement to perseverance we produce the following representation of what *Calanthe vestita* has been in the hands of Messrs. Veitch.

THE NEPAL ASH-LEAVED BERBERRY.
(BERBERIS NEPALENSIS.)

[PLATE 86.]

THE NEPAL ASH-LEAVED BERBERRY.

(BERBERIS NEPALENSIS.)

A Hardy Evergreen Shrub, with Yellow Flowers, belonging to BERBERIDS, *from the* EAST INDIES.

Specific Character.

THE NEPAL HOLLY-LEAVED BERBERRY.—Leaves pinnated, leaflets in from two to five pairs, ovate, spiny-toothed, with the odd one on a long stalklet. Racemes fascicled, upright, compactly flowered. Fruit oblong.

Berberis pinnata: *Roxb. fl. Indica*, ii. 181. Mahonia nepalensis: *De Cand. Prodr.* i. 109. Berberis nepalensis: *Wallich Catalogue, No.* 1490; *Lindley in Hort. Soc. Journal*, vol. v., p. 18.

THIS beautiful specimen of one of the handsomest of the pinnated Berberries was produced in the garden of the Horticultural Society. It is closely allied to the North American *B. glumacea*.

The species is remarkable for the delicate light green of its foliage, which spreads gracefully from a stiff erect stem, something in the way of a miniature Palm. At first the plant produces its leaflets in threes; at a late period they grow in fives, and when in complete vigour they appear in about five pairs with an odd one. Each leaflet is very regularly furnished with large equal spiny teeth along the whole of its ovate or ovate-oblong outline. The flowers are of a rich bright yellow, forming close erect racemes clustered in the upper end of the shoots, and drooping gracefully. Their ovary is oblong.

The plant is understood to prefer sheltered nooks in the Himalayas, and there only to display the beauty that belongs to it.

It seems probable that Asia contains four Berberries nearly related to this, if not five, all of which would prove horticultural treasures.

First, there is the present plant, which seems to be confined to the chain of the Himalayas and the adjoining districts.

A second is the *B. acanthifolia* of Wallich, abundant in the Nilgherry range; when growing in favourable situations, as Dr. Wight informs us, it forms a small tree. It is known by its very numerous leaflets, as many as twenty-one in some specimens, and bluish-purple globose, not oblong, fruit. It appears to be the same as *B. Leschenaultii* of Wallich and Wight, which the latter finds in almost every clump of jungle about Ootacamund, the well-known sanitarium of the Madras presidency.

A possible third is mentioned by Dr. Wight as having drooping racemes, and inhabiting Coorg. He supposes it to be identical with a plant seen by him on the Pulney Mountains, with "diffuse rambling branches."

A fourth is the *Berberis japonica*, figured at page 7 of the Gleanings in our first volume.

A fifth is a most remarkable species, found by Mr. Fortune in his visit to the tea countries of China, and regarded by him as a possible form of *B. nepalensis*.

GLEANINGS AND ORIGINAL MEMORANDA.

VANDA ROXBURGHII, VAR. WRIGHTIANA. The Bengal (or, as at one time understood, Chinese) species, *V. Roxburghii*, the oldest and best known of the species of Vanda worth growing, had until recently become very scarce; the larger growing section of the genus, of which *V. suavis* may be taken as the representative, had for many years been held in greater estimation than the beautiful neat-habited *V. Roxburghii*. But lately it has been imported in quantity, and amongst these would appear to have turned up the handsome variety above named. It will most likely be found to thrive under treatment such as answers for the type species *V. Roxburghii*. The following is Professor Reichenbach's description:—

A variety of the purple-lipped variety *purpurea*, having exceedingly short lips, and the side lacinia with a few more or less developed anterior teeth. Those who like to compare the actual state of Orchid growing with the first efforts in this direction may compare the old representations in our standard books. Both Curtis's *Botanical Magazine*, 1821, tab. 2245, and Edwards's *Botanical Register*, 1820, tab. 306, show long lax inflorescences with lax flowers where we now only see short, strong racemes with ascending strong flowers.—*Gardener's Chronicle*, N.S., vol. xx., p. 262.

CYPRIPEDIUM TONSUM. *H. G. Reichenbach, f.* A new species of Cypripedium which flowered during the autumn of 1883 with Messrs. Veitch, of the Royal Exotic Nursery. It is a well-marked kind, and adds another to the now numerous species and hybrids of this favourite family.

Leaves strap-shaped, rather narrow, marked as in the green-leaved *Cypripedium Dayanum*. Peduncle long, reddish-brown, with very short hairs. Bract much shorter than the short-haired ovary. The odd sepal is wide, elliptical acute, whitish, with twenty-one strong green nerves, a small sepia blotch on each border inside, and a green area of disk outside. The lateral sepals form a narrow, acute, short body, half as long as the large lip. The petals are conspicuous, oblong-ligulate acute, nearly free from any cilia (!), green in the middle of the disk, washed with sepia, elsewhere with some small very dark blotches at the border against the upper sepal, some large ones in the central line, and a few others in the neighbourhood. Lip greenish, with a sepia wash on the anterior superior surface of the sac, the horns of which are conspicuous. The stalk of the lip has a few green warts.—*Gardener's Chronicle*, N.S., vol. xx., p. 262.

IMPATIENS CORNIGERA. *Hooker.* A robust and handsome tender annual, with clusters of hairy large purple and yellow flowers in the axils of the leaves. Native of Ceylon. Introduced in 1851.

Raised in the stove of the Royal Gardens, from seeds sent from Ceylon by Mr. Thwaites. It flowered the whole summer and autumn, and may be pronounced a really ornamental plant. In our herbarium we find specimens which we consider to be identical, from Assam, sent by Major Jenkins, and among

those specimens are some with glabrous flowers, which have considerable affinity with *Impatiens lævigata* Wall., but from which the present appears truly distinct. Stem erect, three to four feet high, rather stout, succulent, semipellucid, striated, often red at the setting on of the leaves, very thick and much branched and rooting below. Leaves alternate, large, sometimes nearly a span long, ovate, acuminated, penninerved, pale beneath; petiole and midrib generally red, the margin very obscurely crenato-serrate, the minute teeth bearing a seta which is long and conspicuous at the base of the leaf; the edge too, as seen under a lens, is everywhere ciliated; petiole one to two inches long, and nearly a line broad, semiterete, margined, the margin bent, with more or less numerous long, soft, distant fimbriæ tipped with a gland. Peduncles aggregate, axillary, single-flowered, much shorter than the petiole, a little enlarged upwards, and curved down with the weight of the flower. The size of the flower is about equal to those of *Impatiens balsamina*, and the colour is yellowish, much suffused with pink. The upper sepal (two united) is remarkable for a large green horn-like projection from the back; the lower for being downy, and for the short, much-curved, green spur. This, like other tropical species of the genus, requires to be treated as a tender annual. If potted in light rich soil, and kept in a stove and well supplied with water, it attains a considerable size, producing thick side-branches, which in time assume a hard woody appearance. When placed in a favourable situation as regards shade and moisture, the lower parts of the branches produce aerial roots, which descend till they reach the soil, and then materially assist in supplying nourishment to the plant. As it flowers late, we fear it will not ripen seeds; but it may be increased by cuttings, which root readily in the summer, but require much care in the winter, as they are liable to damp off.—*Bot. Mag.*, t. 4623.

Sophronite, the species of.

The Sophronites form a very distinct little genus, all the species of which are gems nestling in moss, upon the branches of old trees in Brazil. A short history of them, illustrated by the accompanying woodcut, may be useful both to cultivators and botanists. The genus was first proposed at fol. 1129 of the *Botanical Register*, under the name of Sophronia, afterwards, at t. 1147 of the same work, changed to Sophronitis. The original species named *S. cernua*, imported from Botofogo, a place in the neighbourhood of Rio Janeiro, was for a long time the only kind known in gardens, and appears to have since given rise to three other names, viz., *S. isopetala*, *Hoffmannseggii*, and *nutans*, the plants bearing which are not in any way distinguishable by the accounts their authors have published of them. A second species was added in the *Sertum Orchidaceum*, with large scarlet flowers, under the name of *S. grandiflora*; then in 1840 came a third with violet flowers, called *S. violacea*; and a fourth, *S. pterocarpa*, has long lain buried in herbaria. We offer the following as a good generic character applicable to the four species named:—

Perianthium explanatum, subæquale. *Sepala* et *Petala* imbricata, libera. *Labellum* integrum, cucullatum, linguiforme, basi cum columna connatum, sæpius cristâ simplici transversâ in medio lamellisque 2 axialibus. *Columna* libera, apice utrinque alata: alis integris conniventibus super cristam labelli. *Stigma* concavum, rostello obtuso. *Anthera* terminalis, opercularis, 8-locularis cardine crasso inarticulato. Pollinia 8, antice et postice parallela, caudiculâ duplici pulvereâ —Herbæ *epiphytæ* (Brasilienses) *monophyllæ*, *pseudobulbosæ*, *racemis axillaribus effusis pauciflori*, floribus coccineis v. violaceis.

Of this the following are the species with their distinctive characters:—

Sophronitis cernua *Lindley in Botanical Register*, t. 1129; (*alias* S. isopetala *Hoffmannsegg in Botan. Zeitung*, I. 834; *alias* S. Hoffmannseggii *Reichenbach fil in Linnæa Litt. Ber.*, XVI. 236; *alias* S. nutans *Id. Ibid.*;) folio ovato-oblongo, racemo corymboso pauciflore, sepalis petalisque ovatis acutis, labello repando acuto, columnæ alis brevibus obtusissimis, ovario sex-costato. (Fig. 221; 8, a lip; 9, pollen masses; 10, an end view of the ovary.)

This plant has small brilliant scarlet flowers, with a yellow lip. The sepals and petals are of the same size. There does not seem to be any essential difference in the plants now referred here. The species is common in gardens.

Sophronitis grandiflora *Lindley Sertum Orchidaceum*, t. 5, fig. 2; (*alias* Cattleya coccinea *Bot. Reg.*, fol. 1919;) folio oblongo acuto pseudobulbo ovali tereti longiore, floribus solitariis, spathâ nullâ, sepalis lineari-oblongis obtusis rectis, petalis triplo latioribus, labello ovato basi cucullato indiviso apice plano sepalis breviore. (Fig. 222.)

Found by Descourtilz, upon the high mountains that separate the province of Bananal from that of Ilha Grande; by Gardner, on trees near Rio Janeiro, on mountain heights, where rime frost is seen in the morning (659 and 3878 of his Herbarium). The finest of the genus. Flowers bright scarlet or cinnabar, three inches across; lip yellow.

SOPHRONITIS VIOLACEA *Lindley in Bot. Reg.*, 1840, misc., no. 15; pseudobulbo ovali, folio solitario lineari scapo terminali basi multibracteato 1-floro longiore, labello obovato acuto nudo basi gibboso, columnæ alis maximis carnosis obtusis falcatis. (Fig. 223; 1 and 2, views of the column and wings; 3, lip; 4, pollen masses.)

A common Brazilian plant, found on the Organ Mountains. The very narrow leaves, violet, not brick-red flowers, and numerous dry scaly bracts, readily distinguish it. For the specimen now represented we are indebted to Mr. Bellenden Ker.

SOPHRONITIS PTEROCARPA *Lindley in Herb. Martius;* folio coriaceo subrotundo oblongo, racemis brevibus corymbosis, ovario hexaptero longe rostrato, labello ovato cristato. (Fig. 224; 6, the pollen masses; 7, a transverse section of the ovary.)

This very rare plant in gardens has rosy purple flowers, a very remarkable ovary, with six broad wings and a very long neck, and roundish oblong leaves. Gardner found it on the Organ Mountains (665); Martius on rotting trees near Mainarde, in the province of Minas Geraes.

SKIMMIA JAPONICA. *Supra*, vol. ii., p. 70, Fig. 154.

At the above place we referred to this plant, as a synonyme, the *Limonia Laureola* of Wallich, the materials at our disposal not enabling us to point out any difference. We have since been supplied with further information by Messrs. Standish and Noble, who have fruited the *Skimmia japonica* in abundance, and we are now satisfied that the two plants are distinct. The following letter from Mr. Standish includes the main points of difference :—

"Sir,—At your request, I have much pleasure in sending two or three seeds of *Skimmia japonica*. They have been gathered and put in sand more than a month—therefore are almost spoiled for your purpose. When perfect, they contain two seeds, but never more. Amongst the quantity that we have pulled to pieces for sowing, about one third contained two seeds—the rest only one. The whole of the berries were oval in shape. Enclosed is a leaf of our plant, and one from Mr. Luscombe's plant (*Limonia Laureola*). If you bruise the two you will find a great difference in the scent. Ours flowers at two inches high, and fruits at six inches ; the other, although a very large plant, has never flowered out or fruited. M. Van Geert, of Belgium, tells me that he has had *Limonia Laureola* many years—is quite satisfied it is not the same as ours ; and, although his plant is three feet in height, and every year has all the appearance of coming into bloom, yet never comes. Many persons are selling *Limonia Laureola* for *Skimmia japonica*, and the public will be very much disappointed when they come to see the two plants, therefore I think they ought to be made acquainted with these facts. Every one who has seen *Skimmia japonica* in fruit, has been charmed with it. We find it perfectly hardy ; and, whether looking at it as an evergreen, or its very sweet-scented flowers or fruit, it is a very fine plant."

These statements we can quite confirm ; for, although both have sweet-scented leaves, yet *Limonia Laureola* is by no means so sweet as *Skimmia japonica*. The form of the leaves, too, is different—in the former flat and nearly acute—in the other more lanceolate, rather wavy, and acuminate. We must, however, add that the statement of the authors of the *Flora Japonica*, that the seeds of the *Skimmia japonica* have no albumen, is undoubtedly a mistake. We find in Mr. Standish's perfectly ripe seeds, a large greenish embryo, with a thick layer of white albumen between it and the skin. In this respect then, the two plants are alike, and the supposed difference, of albumen in *Limonia Laureola*, and none in *Skimmia japonica*, falls to the ground.

To prevent further error, we put the distinctions of the two species into the following technical form :—

1. *S. japonica* (Thunberg, and our fig. 154) ; foliis lanceolatis acuminatis undulatis pyri olentibus.
2. *S. Laureola* (*alias* Limonia Laureola *Wallich*) ; foliis oblongis acutis planis rutæ olentibus.

The scent of the leaves of the first seems to us to resemble ripe apples, of the latter a mixture of Rue and Fraxinella.

PHALÆNOPSIS VALENTINI. *H. G. Reichenbach, f.* This is an introduction of Messrs. Low, of the Clapton Nurseries, adding one more to the long list of fine Orchids which owe their introduction to Mr. Low's enterprise. The plant under notice is supposed to be a natural hybrid between *P. violacea* and *P. cornu-cervi*. It is named after its discoverer, Mr. S. H. Valentine.

The flowers are larger than those of *Phalænopsis cornu-cervi*, and smaller than those of *P. violacea*. The peduncle is said to be terete, and like that of the last-named species. The sepals and petals are purple ; petals and lateral sepals white at the base inside with some purple bands. Lip much in the way of that of *P. violacea*, with a spreading angle at the upper corner of the side lacinia, but with a pandurate exterior lacinia, three-lobed at the top, bearing a thick umbo in the middle. There is a three-toothed lamella at the base of the median lacinia, in front of a two-toothed one, leaning on the sword-like blunt appendix. Top of lip mauve and sword-like, appendix half mauve longitudinally, and half white. The remainder of the lip is yellow, part of the side lacinia white, with some purple spots on the upper border and corner. Column yellow with red stripes at the top, purple beneath. —*Gardener's Chronicle*, N.S., vol. xx , p. 262.

TULIPA KOLPAKOWSKYANA. A handsome Tulip, which from the country it comes from, Turkestan, will presumably be hardy in England. We understand it has flowered with Mr. Elwes, and from his remarks, like its ally *T. Gesneriana*, it is likely to turn out variable in colour, some being "bright red with black centre; or yellow, flamed reddish on the back of the outer segments; or, in other cases, pure yellow, with blackish eye and yellow anthers and filaments." But whichever of these colours it assumes, it will be a handsome flower. Ordinary treatment, such as answers for other hardy bulbs, will most likely be found to be all that it requires.

Bulb ovoid, about an inch in diameter. Stem erect, terete, one-flowered, about a foot long. Leaves three or four to a stem, slightly glaucous, unspotted, obscurely ciliated on the margin, glabrous on the face and back, the lowest lanceolate, about a foot long by an inch broad, the upper ones linear. Peduncle glabrous, erect, six or nine inches long. Bud slightly nodding. Flower faintly scented, campanulate, two or two and a half inches long in the cultivated plant; all the segments oblong and acute, an inch or more broad at the middle, the three outer, when

the flower expands, spreading away from the three inner. Segments in the typical red-flowered form as figured, with a faint yellow-black blotch filling up the whole claw. Stamens about an inch long, the glabrous filament often shorter than the linear anther. Ovary large, stout, with three large much-crisped stigmas.—*Botanical Magazine*, 6710.

ILEX LATIFOLIA. A hardy evergreen tree, with long shining leaves, greenish flowers, and small red axillary berries. Said to be a native of Japan. Belongs to Aquifoils. (Fig. 225.)

This is a stout, stiff, evergreen, hardy tree, of great beauty. Every part is entirely free from hair. The shoots, which are deep green or tinged with violet, are somewhat angular near the ends. The leaves, which are from six to eight inches long, are deep green, not coloured at the edge, flat, oblong, acuminate, sharply and pretty regularly serrated, except at the base, which is entire, and gradually narrows into a petiole about three quarters of an inch long. The flowers are small, hermaphrodite, pale green, in very close axillary racemes, about as long as the leafstalks, and supported by short, ovate, acute, shining, cartilaginous bracts. The berries, which ripen in February, are in short compact clusters, of a dull red colour, and nearly spherical; each contains from four to five stones, in which we have never succeeded in finding a kernel.

225

This valuable plant passes under the name of *Ilex latifolia*, by which Thunberg designated a small tree called, in Japan, *No-Ko-Giri*; but, if the statement of that botanist can be trusted, his plant must be different, for he says the leaves are egg-shaped, and three inches long by two broad, which gives them an entirely different outline from the species before us, the proportion of whose leaves is not three by two, but six or seven by two, a very material difference. Nevertheless, in the absence of any authentic evidence, we leave the garden name as we find it, especially since it is probably the *I. latifolia* of Zuccarini and Siebold (*Flovæ japonicæ familiæ naturales*, sect. i., p. 40), or *I. macrophylla* of Blume. According to the first of these authors, the leaves in the wild plant vary in form, being, on the same branch, oblong, ovate, or elliptical, acuminate or obtuse, and finely serrated, or slightly crenate.

The species nearly approaches the *Ilex Perado* of the Hortus Kewensis, a native of the Canaries, figured in the *Botanical Magazine*, t. 4079, under Webb and Berthellot's name of *I. platyphylla*, another very handsome hardy shrub, differing from this in bearing clusters of large white flowers, and fruit more than twice the size of that of the present plant. There is no doubt that this *I. latifolia*, of which we believe two varieties are in cultivation, and which is plentiful in the nurseries, is as hardy as the common holly itself.

EUGENIA UGNI. *Hooker.* (*alias* Myrtus Ugni *Molina*; *alias* Murtilla *Feuillée.*) A beautiful evergreen bush, with globular pink and white flowers, and fragrant foliage. Belongs to Myrtleblooms. Native of Chili. Introduced by Messrs. Veitch.

It forms a charming shrub, native of South Chili and the islands, abundant in Chiloe and in the Bay of Valdivia, where the natives call it *Ugni*, and the Spaniards *Murtilla* or *Myrtilla*; and the habit is not unlike that of our European Myrtle. Introduced by Messrs. Veitch and Son, through their collector, Mr. William Lobb. It proves quite hardy in their Nursery at Exeter, whence we were favoured with the flowering specimen here figured in July, 1851. The flowers are fragrant, and the leaves when bruised are no less so; which ensures its being prized by all cultivators. A shrub, varying in height, according to Mr. Bridges, from two to four feet, copiously branched; branches erecto-patent, clothed with brown bark, young shoots downy. Leaves copious, opposite, spreading, on very short petioles, thick, coriaceous,

ovate, sometimes varying to lanceolate, very acute, impunctate, nerveless, the margin reflexed, dark green above, pale and when dry almost white beneath. Peduncles axillary, solitary, single-flowered, with a pair of linear reflexed bracts at the setting on of the flower. Calyx-tube turbinate, dotted; limb of five (or rarely four) recurved, linear lobes, exactly resembling the bracts. Petals five (or four), erect, orbicular, very concave (forming a globose corolla), white, tinged with rose. Stamens numerous; anthers red. Style shorter than the petals, thick, subulate. Like most of the genus, it strikes freely from cuttings.—*Botanical Magazine*, t. 4626.

When we saw this in Messrs. Veitch's nursery, it was loaded with little pendulous spherical purple fruit, each having at its base the pair of bracts above described, curved back so as to resemble horns.

PENTSTEMON BACCHARIFOLIUS. *Hooker.* A half-hardy perennial, with long panicles of rich crimson flowers not unlike those of *P. Hartwegii.* Native of Texas. Introduced at Kew.

Stems erect, or decumbent at the base, a foot to a foot and a half high. Stem scarcely branched (except where it terminates in the panicle), terete, stout and rigid, of a purple-brown colour, and, as are the pedicels, bracts, and flowers, even the corolla within and without, clothed with minute glandular pubescence. Leaves in rather distant pairs, rigid, dark green, spreading, coarsely and spinescently toothed or serrated (generally less so at the base), glabrous; the lower ones spathulate, upwards on the stem becoming oblong, and finally, nearest the flowers, rotundate, obscurely penninerved, all of them quite sessile. Panicle terminal, elongated; primary peduncles opposite, three-flowered, bracteated at the setting on of the peduncles and pedicels; bracteas small, broadly ovate, reflexed. Calyx small, cup-shaped, deeply cut into five imbricating, ovate segments. Corolla rich scarlet, an inch and a half long; tube infundibuliform, labially compressed, slightly ventricose below, the mouth rather oblique, marked with a white ring; the limb obscurely two-lipped; upper lip two-lobed, lower of three larger lobes, all patenti-reflexed. Stamens included; the fifth stamen is an abortive glabrous filament. Ovary oblong, gibbous on one side at the setting on of the long slender style; stigma capitate. This species of Pentstemon is a native of the same region as *P. Wrightii.* Judging by the appearance of the plant after a severe frost, we may conclude that it is not sufficiently hardy to live throughout the winter without some protection; it is therefore desirable to keep a stock in pots, that may be placed in a cool frame during the winter. Being a late-flowering species, it did not ripen its seeds, but, like the allied species of the genus, it may be increased by cuttings.—*Botanical Magazine*, t. 4627.

SALVIA BOLIVIANA. This plant appears to have been supposed to be synonymous with *S. rubescens,* but from a gardening point of view the subject of our notice is much the best, the flowers being more attractive. Both kinds rank high in the fine genus to which they belong, the autumn flowering species of which contribute so much to the gay appearance of our greenhouses through the dull season. When better known this Salvia will doubtless become a favourite, its dense erect panicles of glowing scarlet flowers being extremely effective. It will no doubt be as easy to manage as the other sorts in cultivation requiring similar treatment. From Bolivia.

A branched under-shrub. Leaves three to six inches long, ovate-cordate, acute, wrinkled, crenulate; petiole slender, one to three inches long. Panicle subsessile, two feet high, branched; branches densely clothed with crowded whorls of flowers. Flowers many in a whorl, pedicelled, suberect; pedicel shorter than the calyx. Calyx three-quarters of an inch long, between funnel and bell-shaped, dull purple or green and purple, base acute, tube deeply grooved and strongly nerved; lips one-third as long as the tube, recurved, broadly ovate, upper entire acute, lower with two small subulate teeth. Corolla four times as long as the calyx, tubular, slightly curved, glabrous, bright scarlet; upper lip very small, concave, obtuse, horizontal; lower about twice as long, broad, shortly three-lobed, lobes rounded. Stamens with one anther-cell slightly exserted, filaments very short; arms of the connective much longer than the filament, quite straight; barren arm rather shorter than the other; staminodes two, minute, capitellate; style very slender, bearded below the tip. -*Botanical Magazine*, 6714.

[PLATE 87.]

THE DARK PURPLE HELLEBORE.

(HELLEBORUS ATRORUBENS.)

A Hardy Herbaceous Plant, from CROATIA, *belonging to the Order of* CROWFOOTS.

Specific Character.

THE DARK PURPLE HELLEBORE.—Radical leaves quite smooth, pedate, pale beneath and shining: those of the stem nearly sessile and palmate. Stem rather angular, branched by bifurcation. Sepals roundish, coloured.

Helleborus atrorubens: *Waldstein & Kitaibel, Plantæ rariores Hungariæ*, vol. iii., p. 301, t. 271; *De Cand. Prodrom.* i. 47.

ALTHOUGH very far from a novelty, this curious plant is not so well known as the white kinds. That which is now figured was kept in a greenhouse in the garden of the Horticultural Society, where it had been received from Mr. Van Houtte. It is, however, perfectly hardy, flowering in March and April in a border among shrubs. The skirts of a clump of Rhododendrons suit it perfectly.

It was first made known to botanists by Waldstein and Kitaibel, who give a very bad figure of it in their great work on the plants of Hungary, in which they state that it is found wild in woods and thickets in Croatia, in great abundance near Korenicza. The leaves are liable to considerable difference of form, being five-parted, or even nine-parted, but they never assume the lobed condition of the other purple species *H. purpurascens*, nor are the lobes united half-way up; on the contrary, with the exception of the side divisions, they

are distinct almost to the very base. The stem is about eighteen inches high, and produces its branches by two or three series of forkings. The flower-buds are a deep black-purple; the expanded flowers are of a peculiar violet-purple, except at the edges and centre, both which are green; but in a few days the violet flies off, and leaves nothing behind except a dingy green tinted with dull purple. No such brilliancy as is found in our figure is produced in the open air as far as we have remarked. The plant is, however, perfectly hardy.

The Honourable W. F. Strangways, who has paid much attention to the species of this genus, has favoured us with the following useful memorandum respecting them:—

Since I find that HELLEBORES are attracting some notice as fine hardy herbaceous plants, fit for undergrowth in woods and shrubberies, the following synopsis may perhaps be acceptable:—

A. *Suffrutescent, with biennial stems.*

H. argutifolius lividus	three-leaved.
H. fœtidus	palmate-leaved.

B. *Herbaceous, with annual stems.*

H. niger, two or three varieties abchasicus olympicus orientalis atrorubens	with coloured flowers.
H. cupreus purpurascens intermedius	with dusky flowers.
H. viridis laxus pallidus odorus angustifolius graveolens	with green flowers.

H. Bocconi, and perhaps another species—doubtful—in Italy. H. fœtidus is a native of Wales; H. viridis, of Dorsetshire; H. argutifolius and lividus, of Corsica; H. niger of the Alps; H. abchasicus, orientalis, and olympicus, of the Levant. The rest, of Hungary. All, except lividus, of the easiest culture in shady situations.

THE CILIATED RHODODENDRON.
[RHODODENDRON CILIATUM.]

[PLATE 88.]

THE CILIATED RHODODENDRON.

(RHODODENDRON CILIATUM.)

A Hardy (?) Evergreen Shrub, from SIKKIM-HIMALAYA, *belonging to the Order of* HEATHWORTS.

Specific Character.

THE CILIATED RHODODENDRON.—A low rigid shrub. Branches, leaf, and flower-stalks covered with stiff spreading hairs. Leaves on short footstalks, elliptical, obovate, very sharp, bright green above, the margins and mid-rib with stiff spreading hairs, paler and rather glaucous below, dotted with small scales. Flowers four or five together, pale purple, on stout short flower-stalks. Sepals broadly ovate, blunt, ciliated on the margin. Corolla bell-shaped, with spreading recurved lobes. Stamens ten. Ovary scaly, five-celled. —*J. D. Hooker.*

Rhododendron ciliatum: *J. D. Hooker, Sikkim Rhododendrons*, t. 24; *Journal of Horticultural Society*, vol. vii., pp. 77, 95; *Botanical Magazine*, t. 4648.

THIS was the first of the true Sikkim Rhododendrons which flowered in this country. Messrs. Standish and Noble exhibited the specimen now represented to the Horticultural Society, and the species also produced its flowers at Kew. It is not a little remarkable that neither of them resembled in colour the beautiful figure in the Sikkim Rhododendrons, or indeed each other. In a wild state the blossoms appear to be violet; with Messrs. Standish and Noble they were pale delicate rose-colour; at Kew they were almost white.

This is, no doubt, one of the most cultivable of the Indian alpine species, those who have had the worst success with others having managed to keep it in health. It has a peculiarly bright green aspect, breaks its buds very early if in a greenhouse, and seems as little impatient of confinement as of external cold when exposed. It does not appear to grow above a foot or two high, and begins to blossom when not more than six inches tall. The flowers themselves are delicate and beautiful, but the great value of the plant may be expected to consist in its giving dwarfness to mules with the tall and hardy Rhododendrons, such as *ponticum, catawbiense, maximum.* Dr. Hooker, in his very able and instructive paper on the climate of the Sikkim Himalaya, in the *Journal of the Horticultural Society,* speaks thus of the plant before us:—

"R. *ciliatum*.—Distribution and range: *Sikkim*—9000 to 10,000 feet—in rocky valleys of the interior.

"This forms a small very rigid shrub, growing in clumps 2 feet high, generally in moist rocky places. Odour faintly resinous and pleasant. Corolla 1½ inch long, nearly as much across at the mouth; tube rather contracted below, limb 5-lobed, colour pale reddish-purple; upper lobe obscurely spotted. Allied to R. *barbatum*, but widely different in stature, habit, and the scattered scales on the under surface of the leaves. I have not observed it in other valleys than those flanked by snowy mountains, where it is common, scenting the air in warm weather. The scales (as in its congeners) are orbicular, sessile, attached at the centre, formed of 3 concentric series of cells surrounding a central one, in which a resinous fragrant oil is secreted."

GLEANINGS AND ORIGINAL MEMORANDA.

MASDEVALLIA GASKELLIANA. *H. G. Reichenbach, f.* This new species has been named in compliment to H. Gaskell, Esq., Woolton Wood, Liverpool, whose collection of Orchids, we understand, is one of the most complete in the kingdom. It is one of the small-growing species of these most singular and variable Orchids.

The lanceolate acute, narrow, somewhat thin leaves scarcely exceed four inches in length. The peduncles would appear to remain one-flowered. The outer surface of the sepaline cup is purple-mauve, with two yellow areas on the inferior base and apex of the lateral sepals. Tails longer, purple-mauve on both sides. Inside, the cup is light-yellowish, hairy, full of mauve spots. Petals purple-mauve; bivalved in the usual manner at top, and these with acute asperities. Lip calceolar, narrow, long (as in *Masdevallia Backhousiana*), with one chief longitudinal keel, and one on each side; light yellow. Column light yellow with a very long beak. It stands nearest to *Masdevallia radiosa*. —*Gardener's Chronicle*, N.S., vol. xx., p. 294.

MILTONIA BLUNTI. This pretty Orchid was shown at South Kensington at the October, 1883, meeting, by W. Lee, Esq., Leatherhead. It is a desirable kind, quite distinct in appearance from other Miltonias.

The sepals and petals are cream colour, spotted with lilac. The lip is violet, deeper in shade at the base. The individual flowers are quite an inch and a half in diameter.

AERIDES LAWRENCIÆ. *H. G. Reichenbach, f.* If cost was an unfailing index to quality, then this species should be the finest ever imported. A plant of it recently sold in flower at Stevens's rooms realised the unprecedented price of 235 guineas. It is undoubtedly a fine kind, and unless plant collectors meet with it in quantity it is likely to remain dear. The general character of the flower points to its being nearer the old *A. odoratum* than any others of the genus, whilst it is very much superior to that highly-perfumed species. Professor Reichenbach thus speaks of it:—

We may easily describe the inflorescence. A glorious Aerides raceme, surpassing a foot's length, having flowers nearly as large as those of *Aerides crispum*, but near those of *Aerides odoratum*, first with greenish, then white, finally yellowish ground-coloured sepals, the petals flushed at the ends with fine purple, mid-lacinia excluding basilar side lobules of same purple, sending two purple lines to the mouth of the spur. End of the spur green. —*Gardener's Chronicle*, N.S., vol. xx., p. 460.

KNIPHOFIA LEICHTLINII. The Tritomas (*Kniphofia*) of our gardens are now well known as amongst the most effective of out-door plants. Their erect spikes of glowing scarlet flowers are conspicuous amongst all other herbaceous plants. In this species the flowers, yellow and red, are not so brilliant as in the older ones, but they will afford an agreeable contrast to the deeper tints of the red-flowered *K. uvaria*. It has bloomed at Kew, and will most likely require treatment somewhat similar to the older species. A native of Abyssinia.

Stem none; crown of leaves at the base, one to one and a half inches in diameter. Leaves four feet long, about three-quarters of an inch in diameter at one-third distance above the base; bright green, not glaucous, margins quite

entire. Scape three to four feet high, dull green, minutely speckled with red, spike three to four inches long, by one and a half to two inches in diameter, cylindric and obtuse; flowers quite sessile, pendulous; bracts a quarter of an inch long, ovate, acute, with long points, membranous, deflexed. Perianth three-quarters of an inch long, narrowly bell-shaped, slightly contracted above the base, dull pale vermilion red and yellow; mouth shortly broadly four-lobed, lobes obtuse erect. Stamens shortly exserted, for not more than twice the length of the perianth lobes; anthers shortly oblong. Style rather longer than the stamens, stigma minute.—*Botanical Magazine*, 6716.

CATTLEYA BRYMERIANA. *H. G. Reichenbach, f.* The great Orchid authority, Professor Reichenbach, seems doubtful whether this is a species or a hybrid. So far as gardeners are concerned this is of little moment, as with them the merits of a plant are decided by the character of the flowers quite apart from whether it is one of nature's productions, or has sprung from the hybridist's handiwork. It would seem to be like *C. Walkeriana*, an old and well-marked species that was introduced when the species of Orchids known to cultivators did not stand as more than one to a score of what are now grown.

Sepals and petals rosy-purple, much like those of an extra good *Cattleya Walkeriana*. The lip unusually broad, side laciniæ blunt-angled, mid-lacinia projecting, obcordate. The mid-area from the base of the lip to the base of the anterior lacinia is fine orange, a broad line going out in a toothed hemicyclical disk in the base of the lacinia. The margins of the side laciniæ and of the mid-lacinia before the orange area are of the warmest purple-mauve, making one think of *Cattleya superba*. The parts of the side laciniæ between the edges and the orange lines rosy, fading inwards into white. When the flowers were quite fresh I saw some fine purple stripes outside on the side laciniæ, which later appeared light purple. The column is white, and has the energetic retuse apiculus of *Cattleya Eldorado*.—*Gardener's Chronicle*, N.S., vol. xx., p. 492.

ÆSCHYNANTH, THE SPECIES OF. We find in the *Allgemeine Gartenzeitung* for November 22, 1851, the following list, by Mr. Edward Otto, of the Æschynanths cultivated in gardens:—

Æsch. Boschianus, *de Vriese*.—Paxt. Mag. of Bot., XII., p. 176, c. tab.—Morren, Ann. de la soc. d'agr. et bot. de Gand., II., 403.—*Java*.
— chinensis, *Gard. et Champ.*, in Hort. Kew gard. misc., I., 328.—*China*.
— grandiflorus, *G. Don* (Trichosporum grandifl., *Don*, olim; Incarvillea parasitica, *Roxb.*; Æsch. parasiticus, *Wall.*), Bot. Mag., t. 3843.—Bot. Reg., 1841, t. 49.—*Silhet*.
— Horsfieldii, *R. Br.* (Journ. d'horticult.), Allg. Gartenz., XI., p. 243.—*Java*.
— javanicus, *Hook.*, Bot. Mag., t. 4503.—Van Houtte, Fl., VI., 65, p. 558.—*Java*.
— Lobbianus, *Hook.*, Bot. Mag., t. 4261.—Van Houtte, Fl., III., 246.—*Java*.
— longiflorus, *Blume* (Lisionotus longifl., *Blume*, olim), Bot. Mag., 4328.—Van Houtte, Fl., I., c. t. 288.—Paxt., XV., 25.—*Mountain woods of Java*.
— maculatus, *Lindl.*, Bot. Reg., 1841, t. 28.—*East Indies*.
Æsch. miniatus, *Lindl.*, Bot. Reg., 1846, t. 61.—Van Houtte, Fl., I., c. t. 236 (Æsch. radicans, *Wall.*—Trichosporum radicans, *Blume*).—*Java*.
— pulcher, *DC.* (Trichosporum pulchrum, *Blum.*), Bot. Mag., 4264.—Van Houtte, Fl., III., 2, t. 6.—Paxt. XVI.—*Java*.
— purpurascens, *Hsskrl.*, Bot. Mag., 4236 (Æsch. albida, *Alph. DC.*—Bignonia albida, *Blum.*—Trichosporum albidum, *Nees.*—Lisionotus albidus, *Blum.*).—*Java*.
— radicans, *Jack.*—*Java*, *Sumatra*.
— ramosissimus, *Wall.* (parasiticus, *Hort.*), Marnock in Floricult. Mag.—*Nepal*.
— speciosus, *Hook.*, Bot. Mag., 4320 (Æsch. Auclandii, *Hort.*). Paxt., Mag. of Bot., 1847, p. 201.—Van Houtte, Fl., III., t. 267.—Ann. de la soc. d'agr. et de bot. de Gand., III., 415, tab. 163.—*Java*.
— Teysmannianus, *Miq.*, Bot. Zeitung, VI., 509 (Æsch. Teysmanni, *J. Linden*, Catalog., 1851).—*Java, in woods and on the trunks of trees*.

In addition to which are the following, of which little or nothing is known:—

Æsch. atrosanguineus, *Van Houtte*, Cat., 1851.
— candidus, *E. G. Henderson's* Cat., 1851.
— Paxtonii, *Paxt.*, Bot. Dict.—*Khasya*.
— pulchellus, *Henders.*, Cat., 1851.
Æsch. repens, *Van Houtte*, Cat., 1851.
— Roxburghii, *Paxt.*, Bot. Dict.—*Java*.
— zebrinus, *Van Houtte*, Cat., 1851.—*Java*.

SARMIENTA REPENS. Those who are acquainted with the scarlet-flowered *Mitraria coccinea*, itself a Chilian plant, may form a fairly correct estimate of this Sarmienta, as in appearance the flowers are almost a counterpart of those of the Mitraria, except that they

are smaller and seem to be produced more freely. The plant is also a weaker grower, and is quite procumbent in habit, which, coupled with its apparently profuse flowering disposition, points to its being an excellent subject for growing in hanging baskets, in which way it will be most effective. It will, no doubt, succeed under treatment such as the generality of cool stove plants. Introduced from Chili.

Stem slender, flexuous; branches sparsely hairy. Leaves one-half to three-fourths of an inch long, opposite, subsessile, bifarious, ovate, obtuse, rather fleshy, upper surface dark-green glabrous opaque, lower pale punctulate. Peduncles solitary or in opposite axils, one-half to one and a half inches long, glabrous, one-flowered. Flowers pendulous, scarlet, sepals five, one-eighth of an inch long, narrow linear, or lanceolate, obtuse, bristly with white hairs. Corolla three-quarters to one inch long; tube elongate, ventricose, constricted at the throat and suddenly at the base into a very narrow cylinder, obscurely pubescent; limb oblique, lobes much shorter than the tube, rounded, spreading. Stamens inserted near the base of the corolla, filaments slender, free, two posterior with perfect anthers far exserted; two anterior filiform with clavate tips or minute anthers; fifth a very short staminode; anthers shortly oblong, free; cells parallel, distinct. Disk obsolete. Ovary superior, attached by a broad base; style capillary, exserted, stigma small, simple.—*Botanical Magazine*, 6720.

226

BEGONIA BULBILLIFERA. *Link and Otto.* A beautiful little stove herbaceous plant, with large rose-coloured flowers. Belongs to Begoniads. Native of Mexico. Introduced by the Berlin Garden. (Fig. 226.)

This is one of the beautiful bulbous Begonias, which are far more rare than those with permanent stems or fleshy rhizomes. The stem is downy. The first leaves are heart-shaped, roundish, scarcely unequal-sided, crimson beneath; the older much more oblique, heart-shaped, acuminate, and somewhat doubly crenate. Numerous little flattish bulbs sprout up from the axils of these leaves. The flower-stalks are axillary, and an inch long. Petals four, the two larger nearly an inch long, oblong; the two inner much smaller; all are deep rose-coloured. The males and females are alike; the ovary is acutely trian-

gular. The plant grew out of the earth in which some orchidaceous plant was sent from Mexico by Mr. Schiede. It flowers from August to October, in any good hothouse, or even greenhouse, provided it is planted in good rich, light earth, and has plenty of air.—*Link and Otto, Icones*, 45.

CASSINIA LEPTOPHYLLA. *R. Brown* (*alias* Calea leptophylla, *Forster*). A hardy evergreen shrub, with clusters of white flowers. Native of New Zealand. Flowers white. Belongs to Composites. Introduced in 1824. (Fig. 227.)

We received this from an anonymous correspondent of the *Gardener's Chronicle*. It is a dwarf, compact, heath-like bush, with dark green linear leaves, hoary, and rather yellow beneath. At the end of every branchlet is a short corymb of flower-heads, the largest of whose involucral scales are brownish, the innermost spreading and white. It is said to be a native of sandy fields near "Tolaga" and Queen Charlotte's Sound. It probably requires the same treatment as its ally, *Swammerdamia antennifera*, now beginning to be made known as a very pretty, novel, evergreen hardy bush. We see, from specimens in our possession, that the plant flowered so long ago as 1824, in the garden of the Horticultural Society, in which it had been raised from New Zealand seeds. We also possess wild specimens from the same country from Mr. Bidwill.

227

THE DARK-EYED FRINGED DENDROBE.

(DENDROBIUM FIMBRIATUM; VAR. OCULATUM.)

[PLATE 89.]

THE DARK-EYED FRINGED DENDROBE.

(DENDROBIUM FIMBRIATUM; VAR. OCULATUM.)

A Stove Epiphyte, of great beauty, from the EAST INDIES, *belonging to* ORCHIDS.

Specific Character.

THE FRINGED DENDROBE.—Stems terete, leafy. Leaves ovate-lanceolate. Racemes lateral, lax, many-flowered. Bracts herbaceous, minute. Sepals oblong, spreading, flat. Petals larger, toothletted. Lip undivided, rounded, hooded, shaggy, fringed; the fringes lacerated.

Var. B. *Dark-eyed.* Flowers larger, with a deep brown spot in the middle of the lip.

Denbrobium fimbriatum: *Hooker, Exotic Flora*, t. 71; *Lindley, Genera & Species*, No. 38. Var. B:—D. fimbriatum oculatum: *Botanical Magazine*, t. 4160.

OF this most beautiful plant our gardens contain two distinct varieties: one with whole-coloured flowers, the other with a deep rich pitch-brown spot in the middle of the lip. In both the colour is otherwise of a rich apricot-yellow, rendered the more brilliant in consequence of the surface and edge of the lip being cut up into glittering points innumerable. The first was sent home many years ago by Dr. Wallich, and flowered in the Botanic Gardens at Liverpool about the year 1822; the second, figured from Chatsworth, is of more recent introduction, and is sometimes known under the erroneous name of *Paxtoni*, which is a two-flowered species. The wild specimens in our possession, belonging to the second or dark-eyed form, were collected by Griffith in Mergui; the whole-coloured form seems to come only from Nepal.

It is most nearly related to *D. claratum* (Fig. 184), which is readily known by its long membranous bracts, and from *D. Gibsoni* (Fig. 193), the flowers of which are smaller, and never open flat. Neither of those species has any fringes upon the petals.

A CATALOGUE

Of the DENDROBES *belonging to the Section* STACHYOBIUM, *having an undivided lip; with their synonymes and horticultural merits.*

GROUP 1.—AUREA.

1. D. auriferum, *Lindley*.—China.—Flowers yellow, with long tapering points, and enclosed in the hooded bracts of short lateral racemes. Only known from a drawing in the library of the Horticultural Society.
2. D. flavescens, *Lindley* (alias *Onychium flavescens*, Blume).—Java.—Flowers small, yellow.
3. D. rhombeum, *Lindley*.—Manilla.—Very like *D. aureum*, but the flowers are racemose.
4. D. sulcatum, *Lindley*.—East Indies.—Flowers erect, yellow, whole-coloured.
5. D. polyanthum, *Wallich*.—Moulmein.—Flowers yellow (?), very pale (?).
6. D. Gibsoni, *Paxton*.—East Indies.—Flowers in long pendulous racemes, rich apricot-yellow, with a purple stain on the lip.
7. D. fimbriatum, *Hooker*.—Nepal, Burmah.—Var. A: flowers rich orange-yellow, whole-coloured. Var. B: flowers larger, with a rich purple-brown centre to the lip.
8. D. clavatum, *Wallich*.—Assam.—Flowers large, bright yellow, with a double rich brown stain in the middle of the lip.
9. D. moschatum, *Wallich* (alias *D. calceolus*, Hooker; alias *D. cupreum*, Herbert).—Burmah, Ava, Pegu.—Flowers large, pale nankeen coloured, richly stained and veined with crimson, musky-scented.

GROUP 2.—AXANTHA.

10. D. Dalhousieanum, *Paxton*.—East Indies.—A magnificent plant, with large cream-coloured flowers tinged with rose, and a pair of broad purple blotches on the lip.
11. D. formosum, *Roxburgh*.—East Indies.—Flowers white, very large.
12. D. mutabile, *Lindley* (alias *Onychium mutabile*, Blume).—Java.—Flowers pale rose; lip with three yellow glands.
13. D. sclerophyllum, *Lindley* (alias *Onychium rigidum*, Blume).—Java.—Flowers whitish, with three yellow glands on the lip.
14. D. triadenium, *Lindley*.—Java.—Flowers nearly white, with a violet spot on the ends of the sepals and lip; the latter with three yellow glands. Probably these three last may be only varieties of each other.
15. D. aduncum, *Lindley*.—East Indies.—Flowers almost transparent, of the most delicate pink.
16. D. japonicum, *Lindley* (alias *Onychium japonicum*, Blume).—Japan; cultivated in Java.—Flowers lilac, sweet-scented, with a ciliated lip.
17. D. nudum, *Lindley* (alias *Onychium nudum*, Blume).—Java.—Flowers pale purple, changing to yellow.
18. D. calcaratum, *A. Richard*.—Island of Vanikoso.
19. D. ramosum, *Lindley*.—East Indies.—Flowers small, colourless.
20. D. herbaceum, *Lindley*.—East Indies.—Flowers small, greenish, inconspicuous.

N.B.—D. cassythoides, *A. Cunningham*, a leafless creeping plant from Port Jackson, described in the *Botanical Register* for 1836 under figure 1828, the pollen of which is unknown, is probably some Vanilloid plant allied to Cyrtosia, if not belonging to that genus.

THE MYSORE HEXACENTRE.
[HEXACENTRA MYSORENSIS]

[PLATE 90.]

THE MYSORE HEXACENTRE.

(HEXACENTRIS MYSORENSIS.)

A Beautiful Stove Climber, from MYSORE, *belonging to the Natural Order of* ACANTHADS.

Specific Character.

THE MYSORE HEXACENTRE.—Leaves oblong, acuminate, three-nerved, somewhat toothed, obtuse at the base or lobed or hastate. Bracts very small. Bractlets ovate, acute, twice as short as the corolla. Lower lip of the corolla three-parted, with ovate reflexed lobes; the upper obtuse, galeate, two-lobed; the tube at the base shaggy inside. Anthers shaggy. Stigma tubular.

Hexacentris mysorensis: *Wight. ic. plant.*, t. 871; fide *Walpers' Annales*, l. 539.

AMONG the fine plants that have been exhibited in the garden of the Horticultural Society, few have excited such universal interest as that now represented. It formed a small umbrella-like creeper trained over a trellis in the manner represented in the annexed vignette, the whole circumference of which was loaded with pendulous racemes of most beautiful large yellow and crimson flowers. The plant was sent to Messrs. Veitch, of Exeter, from the Mysore country, which it inhabits, as its name indicates.

We understand that the plant was sent home by Francis Maltby, Esq., of the H.E.I.C. Civil Service. Our drawing having been taken from an inferior specimen, by no means represents all the character and beauty of the species. One drawing, received from Mr. Maltby since this figure was made, represents the bunches of flowers and buds from fifteen to eighteen inches long, and another with the upper or first flowers dropped, and a large cluster suspended at the end of a flower-stalk of about the same length. Before the plant is out of bloom, the pendulous flower-stalks are from two to two and a half feet long.

Whatever may be thought of the so-called species, which Professor Nees von Esenbeck has separated from the original *Hexacentris coccinea*, Dr. Wallich's *Thunbergia coccinea*, nobody will question the beauty of the plant before us, whose small not leafy bracts, large corollas, and shaggy not smooth anthers, indicate a totally different organisation.

The genus Hexacentris, which signifies six spurs, is named in allusion to two of its stamens having one spur each proceeding from the base of the anthers, while the other two have each two spurs.

GLEANINGS AND ORIGINAL MEMORANDA.

CHEIROSTEMON PLATANOIDES. *Humboldt and Bonpland.* A large greenhouse tree, with broad Plane-like leaves, and brown bell-shaped flowers. Native of Guatemala. Belongs to the order of Sterculiads. (Fig. 228.)

In the *Flore des Serres* are some observations on this plant by M. Adrien de Jussieu, from which we borrow our figure and what follows. The tree, known among us as "the Hand-plant," has never flowered in our collections, although common in them.

228

This tree was observed in Mexico from the time when that country was discovered. The natives made a kind of pilgrimage to it, and collected the flowers for amulets. The more interest attached to it on account of its rarity. According to Humboldt (*Tableaux de la Nature*, 2, p. 161), "but one solitary individual existed in the whole Mexican Confederation,—one ancient stock of this marvellous plant. It was believed that the tree had been planted 500 years before by a king of Toluca, as a specimen of exotic vegetation. But how was it that one individual only was known? and whence came the young plant, or its seed? It was difficult to understand why Montezuma had it not in those Botanical Gardens of Huaxtepec, Chapoltepec, and Iztapalapan, of which Hernandez made such good use, and of which some traces still remain. – It is said to be wild in the forests of Guatemala." [Since Humboldt wrote, the accuracy of his conjecture has been established. Hartweg found it on the mountains of Acatenango, and on the volcano called the Volcan de Agua, forming trees from fifty to eighty feet high.] Hernandez made the plant known in his celebrated work (*Rerum medicarum Novæ Hispaniæ Thesaurus*) by a short description and figure. He preserved the Mexican name Macpalxochiquahuit, a name having the same meaning as the Arbol de las Manitas of the Spaniards, or Hand-plant, so called on account of the five stamens being joined together, and, on their emerging from the dull purple calyx resembling a hand, or rather a paw with five claws. In the garden of Montpellier is a tree raised from seeds obtained from Madrid; in 1813 it had not flowered; but since that time it has blossomed abundantly. At Paris it has been planted out in one of the great conservatories, and has occasionally flowered since June, 1850. To this M. de Jussieu adds a detailed botanical description, for which the reader is referred to the *Flore des Serres* itself, vol. vii., p. 8, &c.

PASSIFLORA SICYOIDES. *Schlechtendahl* (*alias* P. odora, *Link and Otto*). A greenhouse twining plant, with greenish sweet-scented flowers. Native of Mexico. Introduced by the late George Barker, Esq., of Birmingham. Flowers in August. (Fig. 229.)

This fragrant climber first flowered with Mr. Barker in 1839, since which time it has continued to appear occasionally, although we do not find it figured in any English work. The whole surface is covered with forked hairs. The leaves are heart-shaped, three-lobed, with the middle lobe the longest and entire; the lateral lobes, which are placed at right angles with it, are pretty generally furnished with bristle-pointed serratures near the base. Their stalk is remarkable for two large opposite, oblong, glands. The flowers are solitary in the axil of the leaves, on stalks shorter than the petioles; with four very long hairy deciduous bracts. The sepals are greenish, hairy outside, white within; the petals are much smaller and white. The coronet consists of threads, variegated with red. The fruit is bluish black, about as large as an Orleans plum, and readily separates into valves. The seeds are roundish, pale gray, with very deep pits. Messrs. Schiede and Deppe found the plant near Jalapa. It has been distributed among Coulter's Mexican plants under two numbers—62 and 63. Why Messrs. Link and Otto altered Professor Schlechtendahl's name, we are unable to explain.


229

RANUNCULUS CORTUSÆFOLIUS. *Willdenow.* (*alias* R. Teneriffæ *Pers.*; *alias* R. grandifolius *Low.*) A large-flowered hardy perennial, with a weedy habit. Native of the Canary Islands, &c. Blossoms yellow.

Unquestionably the handsomest of all the Buttercups yet known to botanists. The flowers are not only large, more than two inches across, but of a singularly glossy yellow colour; and although a native, as it would seem exclusively, of the Canary Islands and of Madeira, it is quite hardy. In the latter country Ribeira Frio seems to be the only locality: in the former, Mr. Webb describes it as inhabiting grassy banks in the woody districts. It flowers during the summer months. This plant, being of neat habit and flowering freely in a pot, is well suited for being associated with general collections of the smaller alpine plants, which are usually kept in pots for the convenience of removing the more tender species to the protection of a frame during the winter and early spring months. When planted in the open border, it should be protected by a hand-glass, additional covering being provided during severe frosts. It is increased by division of the roots, which should be done in autumn.—*Bot. Mag.*, t. 4625.

VIOLA PYROLÆFOLIA. *Poiret.* (*alias* V. maculata *Cavanilles*; *alias* V. lutea *of Gardens.*)

A very handsome stemless hardy perennial plant, with large yellow flowers. Native of Patagonia. Introduced by Messrs. Veitch.

Some of our readers have seen this beautiful species in the exhibitions of London. It is a stemless hairy herbaceous plant with leaves not unlike those of the dog-violet in form, but thicker, convex, and a good deal wrinkled. From them rise up numerous stout flower-stalks, each three or four inches high, and bearing a single large pure yellow firm blossom, with a short blunt spur. The reason which led to the name *maculata*, or spotted, given this plant by Cavanilles, is thus explained by Dr. Planchon in the *Flore des Serres*, where it is admirably figured :— "Various parts of the tissue of violets, especially the parenchym of the leaves, sepals and seed-vessels, contain small heaps of what seems to be resinous matter, which, in dried specimens, manifests itself on the lower surface of the leaves, the sepals, and the capsules in the form of minute brownish points. These vary in form from the round point, to short lines, such as occur on Anagallis and Parnassia ; they are sprinkled over most violets, and though scarcely apparent in the generality of species, become numerous and very evident in the plant before us, but only on the old and dried leaves. M. van Houtte states that the *Viola lutea* does very well out of doors if treated like an alpine plant, that is to say, kept in a cool shady place, in light soil consisting chiefly of black vegetable mould, and well drained. If grown in pots it flowers freely in the greenhouse during winter. It is propagated by side runners."

DENDROBIUM BIGIBBUM. A tropical New Holland epiphyte, with pretty purple flowers. Introduced by Mr. Loddiges. Blossoms in January. (Fig. 230.)

D. bigibbum (Dendrocoryne) ; caulibus elongatis apice 3-5-phyllis, racemis erectis elongatis dissitifloris, petalis subrotundis sepalis duplò latioribus, labelli trilobi, lobis rotundatis medio cristato basi gibboso, sepalis lateralibus in calcar productis.

This very remarkable plant was obtained from the north-west coast of New Holland by Mr. Loddiges, with whom it flowered. The stems are long, narrow, fusiform, or tapering to the base, closely invested with dry light brown sheaths ; near the end they bear five or six long, narrow, firm, spreading acute leaves, each with *five* ribs (not three, as in the accompanying cut). The raceme is erect, and consists of three or four flowers, placed at the end of a graceful peduncle eight or nine inches long. The bracts are small and scale-like. The blossoms are rich purple, nearly of the same colour as *Bletia verecunda*. The sepals are oblong, acute, flat ; the lateral ones united at the base, so as to form a short blunt spur below the setting on of the labellum. The petals are roundish, and slightly recurved. The lip originates in the sinus above the spur of the sepals, is movable, and projects outwards at its base in the usual way, so that this flower has a kind of double chin. The three lobes of the lip are rounded, and of nearly equal size, the central one being the darkest colour ;

along the middle are three raised lines, which terminate at the base of the central lobe in the form of three short rows of fleshy notches. At the base of the lateral sepals next the orifice of their spur is found on each side a thick callus. The species is nearly allied to *D. Kingianum* and *elongatum*, but is much handsomer.

CATALPA POTTSII. *Seemann.* A half-hardy shrub, from Mexico. Belongs to Bignoniads. Flowers apparently pink. Introduced at Kew.

A bush four to six feet high. Branches very smooth. Leaves coriaceous, linear-lanceolate, entire, glaucous. Flowers from two to two and a half inches long.

Two species of Catalpa, viz., *C. syringæfolia*, Sims, from North America, and *C. longissima*, Sims, from the West Indies, have been for some time cultivated in the gardens of Europe. To these has been added a third from Chihuahua, one of the northern states of Mexico. It was raised by Mr. F. Scheer from seed, sent over in 1850 by Mr. John Potts, and is now to be found in the gardens at Düsseldorf, Hanover, and Leipsig. This circumstance has induced me to name it, and I have accordingly done so after its discoverer.—*Seemann, in Allgem. Gartenzeit.*, Oct. 11, 1851.

CATTLEYA TRIOPHTHALMA. If patience, as exemplified in the working and waiting which the raisers of hybrid Orchids practise, merits reward, then those who thus bring new kinds into existence are deserving in the highest degree. The hybrid varieties of Orchids that owe their existence to the long years of intelligent work and patient attention in Messrs. Veitch's Chelsea establishment, by those indefatigable hybridists, Messrs. Dominy and Seden, would alone make an interesting and valuable collection. The length of time it takes to prove the result of this kind of work is exemplified in the plant under notice, which, after eight years elapsing since it was raised, has now flowered, and is in every way worthy of its high parentage, being a cross between *Lælia exoniensis* and *Cattleya superba*.

Inflorescence three-flowered, each flower as large as a fine *C. superba*, to which in texture they are similar. Sepals ligulate acute. Petals cuneate, oblong acute, wavy, all fine purple-rose. The side laciniæ of the wrapping round the column blunt-angled, whitish-yellow, finest purple on the end, with purple stripes on the disk. Central lacinia transverse semi-oblong-blunt with few strong undulations, fine purple, with deeper and warmer venation. The greatest charm is the beauty of the expanded lip. Over the blade of the anterior lacinia there runs a fine transverse deep yellow area, radiating over the base of that organ, the angles of the side laciniæ being of the finest purple. They surround the upper margin of that area, and ascend in the centre to the lip's base as a purple line, that has each side a large yellowish-white area with light indigitations of purple on nerves. The two light lateral areas, and the transverse mid-area, suggested the name. The white column has a dark purple anther.—*Gardener's Chronicle*, N.S., vol. xx., p. 526.

TRITONIA POTTSII. This appears to be even a finer plant than *T. aurea*, and is no doubt a beautiful addition to our bulbous plants. It seems to be almost hardy, requiring only a little protection to the bulbs in winter. It will also be an acceptable addition to the summer flowering occupants of the greenhouse, grown in pots in the same way as *T. aurea*. It is a remarkably free blooming plant, its reddish-yellow flowers being very effective. Introduced from South Africa.

Bulbs globose, connected by a long thread-like rhizome. Stems slender, erect, three to four feet long including the inflorescence, which reaches almost half-way down. Leaves linear, green, a foot or a foot and a half long. Peduncle furnished with two or three leaves. Panicle a foot or a foot and a half long, composed of three to five ascending branches, bearing twelve to twenty flowers each; spathe of two small membranous valves, the outer lanceolate, the inner oblong, entire or obscurely emarginate at the tip. Perianth infundibuliform, bright deep yellow, more or less flushed on the outside with red, about an inch long, the oblong segments half as long as the tube. Stamens contiguous, inserted half-way up the perianth-tube, with anther and filament of about equal length. Style with three short cuneate branches. Capsule ovoid, obtusely angled, many-seeded.—*Botanical Magazine*, 6722.

LENNEA ROBINIOIDES. *Link, Klotzsch, and Otto.* A Mexican greenhouse tree, with the

appearance of a Robinia. Flowers purple. Belongs to the Leguminous order. Introduced by the Royal Garden, Berlin. (Fig. 231.)

This is a small tree, in cultivation a mere bush, from two to three feet high, destitute of hairiness, with unequally pinnated distichous leaves. Stipules free, subulate, deciduous. Leaflets in four or five pairs, with prickly stipules at their base. Racemes axillary, pendulous. Flowers as large as those of the Judas tree, and of the same colour, appearing in May. The genus is recognised by Mr. Bentham, who places it between Robinia and Sabinea. It lives out of doors at Berlin in the summer, although requiring there the shelter of a greenhouse in the winter.

231

ODONTOGLOSSUM EHRENBERGII. *Klotzsch.* A Mexican Orchidaceous epiphyte, with delicate white flowers spotted with brown on the sepals. Introduced in 1846. Flowers in August. (Fig. 232.)

232

C. Ehrenbergii (Leucoglossum); pseudobulbis caespitosis, globoso-subelongatis, compressis; foliis solitariis, ellipticis, acutis, membranaceis, rigidis, margine subreflexis; scapo unifloro, medio articulato, bibracteato; perigonii foliolis candidis, exterioribus lanceolatis, acuminatis, dorso longitudinaliter carinatis, patentibus; interioribus latioribus, oblongis, acutis, utrinque attenuatis, recurvis; labello subcordato, acuto, undulato, crenulato; lamellis unguis callosis, integerrimis, antice in rostrum obtusum breve confluentibus; columna aptera, puberula.—*Klotzsch abbrev.*

This is one of the prettiest of the white-lipped Odontoglots. M. Charles Ehrenberg found it on an

oak tree near San Onofro, on the banks of the River Zimapore. In habit it is hardly distinguishable from *O. Rossii*, to which we formerly referred it; but it seems to have a dwarfer habit, smaller flowers, and especially thin delicate white sepals banded with brown, instead of green ones; the lip, too, is acuminate, not rounded, each stem bears but one flower, and the processes at the base of the lip are white, not yellow, and join into an undivided apex instead of a two-lobed one. Perhaps as good a way of bringing this species distinctly to the reader's eye is to speak of it as being intermediate between *O. Rossii* and *O. stellatum*.

ADIANTUM CUNEATUM STRICTUM. *T. Moore.* A small-growing variety of the beautiful and now numerous Adiantums. It will be useful for decorative purposes where larger forms would be out of place. No doubt it will succeed under cultural conditions similar to those required by other Adiantums.

Fronds dwarf, erect, quadripinnate, with ascending somewhat spirally arranged pinnæ; sori roundish reniform, inserted as in the type. This is a very distinct variety of the wedge-shaped Maidenhair, one of several which have appeared within the past year or two. It is of dwarf and slender habit, the fronds being only from six to eight inches high, and growing quite erect instead of drooping as in the type; the pinnæ are also directed upwards, and springing, as they do, alternately from the rachis, they present the appearance of an ascending spiral series of short erect branchlets. Though the pinnæ are short, they become tripinnate at the base, the larger ones being about a quarter of an inch across, cuneate, the terminal ones somewhat trapeziform, the upper margin shallowly lobed in all. The plants are freely fertile; the sori being obversely roundish-reniform, inserted singly at the base of a sinus in the centre of one of the marginal lobes.—*Gardener's Chronicle*, N.S., vol. xx., p. 526.

TRICHOPILIA ALBIDA. *Wendland.* A stove epiphyte, with white and yellow flowers. Belongs to Orchids. Native of the Caraccas. Introduced by M. Otto, of Hamburgh.

T. pseudobulbis oblongo-lanceolatis, compressis, sulcatis, monophyllis; foliis oblongo-lanceolatis, planis, basi subcordatis, apice acuminatis, recurvis; racemis basilaribus pendulis, subtrifloris; perigonii foliolis conformibus, lineari-lanceolatis, acuminatis, undulatis, rectiusculis, subtortis, pallide luteo-viridulis, margine subhyalinis; labello petalis longiore, quadrilobo, lobis rotundatis undulato-crispatulis, basi arcte convoluto, albido, fauce punctis luteo-ochraceis confluentibus adspersâ; cucullo trilobo, laciniis fimbriatis, mediâ longiore.

The compressed pseudobulbs are five inches long, and from six to ten lines broad, flat, somewhat furrowed and sharp-cornered, oblong and a little narrow towards the top. The young inflorescence is covered by darkly-spotted sheaths. The leaves are a little longer than the bulbs, from an inch to an inch and a half broad, solitary, leathery, somewhat heart-shaped and downy at their base, flat, and with recurved points. The flower-spikes, which generally bear three flowers, proceed from the base of the pseudobulb, are from four to six inches long, and of the thickness of a crow-quill. The flower is three inches in diameter; the sepals and petals are alike, an inch and a half long, and three lines broad, linear-lanceolate, pointed, waved at the edge, tolerably erect, but inclined a little forwards, not much twisted, pale yellow-green, and nearly transparent at the edge. The labellum is smooth, a little longer than the sepals, four-lobed; the lobes are rounded, waved, and crumpled at the edge, and rolled closely together at the base; in the middle of the labellum are a few irregular raised longitudinal streaks. The colour of the flowers is white, with a large spot in the middle, made up of a quantity of small, crowded yellow ochre-coloured points. The column is straight, white at the top and light green towards the base. The hood is three-lobed, the middle lobe being a little prominent, and all fringed. The flowers have a faint delicate odour, and last only a few days. This species is closely allied to *Trichopilia tortilis* Lindl. and *T. coccinea* Lindl., and is distinguished from them, independently of the colour of the flowers, by its longer pseudobulbs, and by its scarcely twisted petals. It was imported in July, 1851, with other Orchids, from M. Wagener in the Caraccas, consigned to M. C. Otto of the Hamburgh Botanic Garden.—*Wendland, in Allgem. Gartenzeit., Nov.* 15, 1851.

CANNA SANGUINEA. *Warczewicz.*

Concerning this, which is not the *Canna sanguinea* of others, we find the following memorandum in the *Allgemeine Gartenzeitung* for September 13th, 1851:—

"This new species, from Costa Rica, was introduced into the gardens of Germany by M. Warczewicz in 1850. It is one of those which succeed in the open ground in summer; it flowers freely, and is remarkable for its beautiful blood-red blossoms. In autumn it should be taken up and kept all the winter in a temperate greenhouse. If divided and forced in March or April, an early flowering may be expected. To be seen in all its beauty, the plant requires a warm sheltered place, rich garden mould, and a plentiful supply of water. It seeds abundantly. The specimens which we saw in M. Mathieu's garden were three feet high."

CYCNOCHES MUSCIFERUM. A curious epiphyte from Colombia, with pale flowers spotted with brown. Flowers in February. Introduced by Messrs. Rollissons from Mr. Linden. (Fig. 233.)

C. muscifernm; racemo laxo stricto, bracteis subulatis, sepalis lineari lanceolatis acutis dorsali refracto, petalis

linearibus, labello membranaceo hastato : laciniis lateralibus linearibus ascendentibus intermediâ basi rhombeâ barbatâ in apicem linguiformem attenuatâ.

This very curious little plant looks like a diminutive form of *C. barbatum ;* its flowers are very pale bistre plentifully bestrewed with minute brown specks and freckles. It is a curiosity, but not brilliant enough in appearance to suit the taste of any except botanists. The resemblance of the blossoms to some kind of fly is striking.

SISYRINCHIUM MAJALE. *Link, Klotzsch & Otto.* A half-hardy perennial, from Chili, belonging to the Order of Irids. Flowers yellow with a brown eye. (Fig. 234.)

A dwarf perennial, with rough narrow grassy leaves, and large rough green spathes, from among which the flowers appear in succession for some weeks in May and April. The roots are fleshy and fasciculate ; the stem is from six inches to one foot and a half high ; the sepals and petals bright yellow with a deep brown spot, variable in size, at the base of each. This is no doubt the *Sisyrinchium graminifolium*, var. *pumilum*, of the *Botanical Register*, t. 1914 (1915), of which specimens are before us from Conception, where they were gathered by Macrae. The true *S. graminifolium* is represented by No. 478 of Cuming's Chilian Collections. According to Dr. Klotzsch, the species most nearly allied

to *Sisyrinchium majale* are *S. tenuifolium*, *convolutum*, *palmifolium*, *flexuosum*, and *graminifolium*. *S. tenuifolium* is distinguished by its entire-edged calyx; *S. convolutum*, by its fibrous roots; *S. palmifolium*, by its bulbous root and white flowers; *S. flexuosum*, by its crooked stem and its densely hairy ovaries; and *S. graminifolium*, with its varieties, only by its undivided bracts, cylindrical smooth stem, and rough leaves.

CEDRONELLA CANA. *Hooker.* A handsome hardy perennial, with long interrupted spikes of purple flowers. Native of New Mexico. Belongs to Labiates.

Mr. Bentham has long ago referred the *Gardoquia mexicana*, H. B. K. (*G. betonicoides*, Lindl. and Graham in the *Botanical Magazine*, t. 3860), to the genus *Cedronella*. The two genera are, however, in different sections of the *Labiatæ*. From that species our present one, detected by Mr. Charles Wright in an expedition from Western Texas to El Pasco, New Mexico, and No. 474 of that gentleman's distributed collections, differs in the entirely glaucous stem and leaves, occasioned by a minute hoary pubescence, scarcely visible except in the recent plant, in the much smaller, more numerous, and shorter leaves, quite entire among and much below the whorls of flowers. Like that, however, the leaves abound in fragrant oil-dots. It flowers in the summer months, and makes a handsome appearance in the flower-border. Two and a half to three feet high, much branched, especially at the base; branches opposite, square, hoary with very minute pubescence. Leaves small and entire, hoary in the upper part of the stem and near and about the flowers, and there numerous and approximate, ovate or ovato-lanceolate; lower down larger, and cordato-ovate, or even approaching to hastate, all rather obtuse, scarcely ever acuminated, and then but slightly so, more or less strongly dentato-serrate, the teeth never reaching to the point. Whorls of flowers in axillary racemes, shortly pedunculate, the flowers pointing upwards. Calyx tubular, with five narrow, almost subulate, or subulato-lanceolate, erect teeth. Corolla almost exactly as in the *C. mexicana*.—*Botanical Magazine*, t. 4618.

ROSA ALPINA. This is far from being a new plant, but the decided and deserved liking which the public now evince for elegant single flowers, roses as well as others, is sufficient warrant for this lovely single rose being noticed here. It flowers in summer, and deserves a place in every garden. A native of the Alps and Pyrenees.

A shrub six to eight feet high, almost devoid of prickles; branches sub-erect, slender, dark green, glaucous. Leaves crowded, two to five inches long; petiole and rachis glandular; leaflets five to thirteen, opaque, elliptic or ovate, acuminate at both ends, simply or doubly serrate, naked above, glaucous beneath. Flowers two to two and a half inches in diameter, solitary, sub-erect; peduncle naked, bristly or glandular-hairy; calyx glabrous or glandular-bristly, tube obovoid, very variable in length; sepals very long, narrowly lanceolate, points dilated and serrate or simple, erect in fruit. Petals broadly obcordate, concave, pink or rose-red. Disk none. Head of stigmas convex, slightly exserted. Fruit one to one and a half inches long, obovoid, pyriform or elongate, longer or shorter than the persistent sepals, bright red.—*Botanical Magazine*, 6724.

FRITILLARIA PALLIDIFLORA. A hardy bulbous plant which flowers similarly to its near ally the common Fritillaria (Crown Imperial), so well known for its distinct habit of growth and effective appearance amongst the spring flowering occupants of the herbaceous border. The ground-colour of the flower is greenish-yellow, spotted with reddish-purple. The plant comes from Siberia.

Bulb globose, half an inch or an inch in diameter, subsquamose. Stem stout, erect, varying in length from six to fifteen inches; leaves varying in number from eight to twenty-five, sessile, not cirrhose at the tip, firm in texture, glaucous-green, two or three inches long, lowest oblong, opposite, the rest alternate, the upper ones lanceolate. Flowers one to six, produced from the axils of the upper leaves on cernuous peduncles. Perianth broadly campanulate, about an inch and a half long, truncate at the base, cream-white, tinged with green on the outside, dotted over with minute reddish-purple spots inside; segments oblong or obovate-oblong, each furnished with a small roundish green glutinous foveole at the bend above the claw. Stamens much shorter than the perianth; filaments linear, glabrous; anthers linear-oblong. Ovary clavate, half an inch long; style deeply tricuspidate. Capsule obovoid, with six winged angles.—*Botanical Magazine*, 6725.

THE HOODED ONCID.
(ONCIDIUM CUCULLATUM.)

[PLATE 91.]

THE HOODED ONCID.

(ONCIDIUM CUCULLATUM.)

A Stove Epiphyte, from CENTRAL AMERICA, *belonging to the Order of* ORCHIDS.

Specific Character.

THE HOODED ONCID.—Pseudobulbs oval, long, bluntly ribbed. Leaves oblong lanceolate, flat, as long as the angular scape. Racemes simple, scarcely panicled, Upper sepal and petals oval, somewhat herbaceous, equal, the lateral united into one concave oblong two-toothed body. Lip heart-shaped, fiddle shaped, dilated at the apex, two-lobed, with round toothletted divaricating lobes; the base furnished with three convex rounded plates, and a line of well-defined hairs near the base. Column dwarf, with short rounded auricles near the base. Anther-bed hooded, fleshy.

Oncidium cucullatum: *Lindley, Sertum Orchidaceum*, sub t. 21; *Orchid. Linden; alias* Leochilus sanguinolentus: *Bot. Reg.* 1844, misc. 91.

THIS curious plant was originally made known through a dried specimen, probably from Dr. Jameson, in Sir W. Hooker's Herbarium, gathered on the trunks of trees on the western declivity of Pichincha. It was afterwards found by Mr. Linden, in the account of whose Orchidaceous plants it is mentioned as "an epiphyte with oval obtuse ribbed pseudobulbs. This magnificent species has deep red petals, and a two-lobed violet lip spotted with purple. Forests of Quindiu, at the height of from 7,800 to 8,700 feet; February. The Gallegos call it Hierba buenal and la Mesa." At a later period it was found by Schlim in New Granada, at a place called Las Vetas, at the height of 10,000 feet above the sea.

The first knowledge we had of it in a live state was from a couple of wretched flowers sent us by the late Mr. Barker, when it was supposed to be a *Leochile*, and the following note was published of it in the *Botanical Register*:—

"Although the flowers are small they are very beautiful, having a deep crimson lip richly studded with clear purple spots. In the smallness of its anthers, the extension of the anther-bed behind into an elevated rim, and in the shortness of the column wings, it is somewhat different from the rest of the genus."

It has taken a permanent place among cultivated Orchids, and produced the materials

from which the annexed figure was made, in the collection of Thomas Brocklehurst, of Macclesfield, with whom it flowered. From the gardener, Mr. Pass, we have the following note :—

"*Oncidium cucullatum* was bought at Mr. Linden's sale of imported plants. When received, it was potted in very fibrous peat and broken pots, using plenty of drainage in the pot, and placed in a rather cool and dry atmosphere, until it began to grow, when it was removed to a house used for growing Cattleyas, Odontoglots, and other South American Orchids—together with fruiting pine-plants. The heat would be from 70° at night to 85° in the day; admitting air freely on fine days, giving the plants a light syringing, throwing water on the walks, walls, &c., and closing the house early on sunny afternoons, so as to get a strong moist heat for an hour or two in hot weather. In dull cold days in summer, not uncommon here, I give air for two or three hours in the day, keeping a moist genial heat of 75° to 80° by fire. When in bloom and at rest, I keep them in a much cooler and drier house. I should say that a strong-grown plant would produce more than fifteen or twenty flowers on a spike, and probably larger flowers, for our plant was very small when bought, and the bulb it made was not more than one-third the size of the imported one."

The species seems to vary a little in the colour of the flowers, which are sometimes more rose-coloured than those now represented, and in the form of the lip, a very common circumstance among alpine epiphytal Orchids.

THE DWARF CRIMSON CHINESE AZALEA.
(AZALEA AMŒNA.)

[PLATE 92.]

THE DWARF CRIMSON CHINESE AZALEA.

(AZALEA AMŒNA.)

A Hardy (?) Evergreen Dwarf Shrub, from the NORTH OF CHINA, *belonging to the Order of* HEATHWORTS.

Specific Character.

THE DWARF CRIMSON CHINESE AZALEA.—A dwarf bush. Branches when young covered with ramentaceous scales; when old rust-coloured. Leaves obovate, hairy, blunt, narrowed at the base, evergreen. Calyx wanting (?). Flowers pentandrous.

THIS is a dwarf evergreen bush, resembling *Rhododendron ferrugineum* in habit. The branches when young are closely covered with long thin white ramentaceous scales; when old they are brown and coarsely hairy. The leaves are as small as those of box, flat, obovate, very round at the point, coarsely hairy, paler on the under side. The flowers are rich crimson, almost campanulate, tolerably regularly five-lobed, with that kind of double corolla which is called "hose in hose." No calyx is discoverable; but whether that organ is absent, or is converted into the external corolla, is uncertain.

The specimen now represented was exhibited to the Horticultural Society by Messrs. Standish and Noble, of Bagshot, with whom it had flowered, and was distinguished by a Silver Knightian medal. Branches, uninjured by cold, were produced from a plant which had been exposed during the whole winter without protection. Mr. Fortune has communicated the following information concerning it:—

"This pretty Azalea was found in a nursery near Shanghae, and had been brought from the far-famed city of Soo-chow-foo. Further than this its origin is unknown. It is no

doubt a very distinct species, and probably comes from a country further north than any of its race in China, or, at all events, from a higher elevation on the mountains. The striking form and novel colour of its flowers, its small leaves and neat habit, render it most desirable for bouquets and for decorative purposes. It is perfectly hardy in our climate. We may, therefore, hope to have in time a race of Chinese Azaleas growing and blooming in our borders, and vying in beauty with the well-known Rhododendrons of North America."

Although the plant is in a very bad state, and is clearly a garden production, yet as it seems to belong to some wild form of the genus not before described, we have felt justified in treating it as a distinct species.

GLEANINGS AND ORIGINAL MEMORANDA.

DACTYLICAPNOS THALICTRIFOLIA. *Wallich.* A climbing hardy perennial, with large yellow flowers. Native of Nepal. Introduced by Sir Charles Lemon, in 1834. (Fig. 235.)

We have before us the following memorandum concerning this plant by Mr. W. B. Booth :—"It was raised at Carclew in 1834 from some unnamed seeds which had been presented to Sir Charles Lemon, Bart. Being unacquainted with its native country, we treated it first as a greenhouse plant, but not getting it to flower, we tried it another season in the open border, planted near a standard rose-tree, the stem and branches of which afforded the necessary support to its tender and somewhat succulent climbing shoots, in which situation it flowered during September. Root perennial, tuberous. Stem smooth, glaucous, nearly round, or but very slightly angular, of a brownish green, obscurely marked with small reddish spots. Leaves biternate—each leaf-stalk supporting for the most part nine, sometimes more, ovate acuminate leaflets—of a rich deep green above, and a pale glaucous green, with small strongly marked brownish longitudinal veins beneath. All of them are furnished with a strong wiry tendril, by which the plant attaches itself to anything within its reach, and by this means attains the height of from six to eight feet. Flowers produced in clusters near the extremity of the branches, on a round slender peduncle from two to three inches long, and containing six or more pendant flowers on each. Pedicels filiform, about an inch in length. Sepals two, very small, cordate-acute, pale green. Petals four, greenish yellow, compressed. The two outer ones, alternate with the sepals, are about three-fourths of an inch long, closely connected together and conniving in such a manner as to conceal the two

235

purple spots; anterior part fine purple. Spur ochre-coloured. Professor Reichenbach remarks on the colour of the hybrid, which is so much brighter and deeper than that present in either of the parents. In this the result of Orchid crossing appears to be no way different from that of other plants, the offspring of which not unusually produce flowers so much higher and brighter in colour than their progenitors as to set one speculating whence the colour was derived, if not through high cultivation, which frequently shows itself in the higher colour, as well as in the doubling of the parts of the flowers.

PENTARHAPHIA VERRUCOSA. *Decaisne* (*alias* Conradia verrucosa, *Scheidweiler*). A rigid greenhouse shrub, with tubular scarlet flowers. Belongs to Gesnerads. Native of Cuba. Introduced by Linden. (Fig. 236.)

There is a plant not uncommon in gardens, called *Pentarhaphia cubensis*, which is so like this as to suggest the possibility of the two belonging to the same species. Both were found by Mr. Linden in Cuba: that now figured, on Mount Liban, flowering in May; the other at a place called Pinal de Nimanima, both in the province of St. Jago. They differ, however, in the branches of *P. verrucosa* being covered with little tubercles and being much blistered (bullate) in consequence of the parenchym of the interspaces growing faster than the veins; while in *P. cubensis* the branches are smooth, the leaves flat, and the flowers larger. Both are useful hard-leaved greenhouse shrubs, quite different in constitution from the soft-wooded species of the same natural Order. The genus to which they are referred received its name from the writer of the present note, the *Gesnera ventricosa* of Swartz, upon which it was founded, being the only species known to him. At a later period Prof. von Martius proposed to abolish *Pentarhaphia*, and to create a genus *Conradia*, in which it was to merge. Notwithstanding the obvious objections to this measure, De Candolle unadvisedly acquiesced in it. But Prof. Decaisne, in a luminous paper in the *Annales des Sciences* for 1846, restored the genus *Pentarhaphia*, increasing the number of its species to fifteen, and left Von Martius' name of Conradia for one species only, the *Gesnera humilis* of Linnæus. The genus *Pentarhaphia* still then continues to be known by the five long needle-like teeth of its wholly inferior calyx, its five to ten-ribbed fruit, and its annular disk. The wild specimens of *Pentarhaphia verrucosa* brought from Cuba by Mr. Linden are covered with a glutinous exudation, and the leaves are much harder, stiffer, and more bullate than in the garden plant.

THE PESCATORE ODONTOGLOT.
(ODONTOGLOSSUM PESCATOREI)

[PLATE 93.]

THE PESCATORE ODONTOGLOT.

(ODONTOGLOSSUM PESCATOREI.)

A Stove Epiphyte, of great beauty, from NEW GRANADA, *belonging to the Order of* ORCHIDS.

Specific Character.

THE PESCATORE ODONTOGLOT.—Pseudobulbs ovate, slightly ribbed, two-leaved. Leaves strap-shaped, flat, narrowed at the base, shorter than the loose many-flowered erect panicle. Bracts minute. Flowers membranous. Sepals ovate-oblong, with a small point, slightly wavy. Petals of the same form, but twice as broad. Lip heart-shaped, oblong, cuspidate, somewhat contracted in the middle, rather toothed at the base, furnished on each side with a flat lacerated appendage, a pair of parallel plates being placed between. Wings of the column short, lacerated.

Odontoglossum Pescatorei: *Linden's Catalogue.*

FEW of the Odontoglots equal in beauty this most lovely species, to which the smallness of our plate forbids our doing justice.- The panicle of large white flowers is from two to three feet high, and not much narrower, so far do the branches extend. The flowers themselves are of ample size, of a delicate semi-transparent texture, with a faint blush line along the middle of the sepals, and a stain of yellow near the base of the lip, where also are found a pair of broad deep crimson lacerated appendages. The column itself is white, with the ragged wings also stained with crimson.

A specimen in flower was sent us by Mr. Linden, and when exhibited, although long

detained on its road from Brussels, struck all who saw it with admiration. And yet Mr. Linden assures us that those very flowers had been expanded *for two months.* It had been, in fact, exhibited at a great horticultural meeting at Brussels, when it received a prize, which it most richly deserved. It was named after the great and liberal French horticulturist, Mons. Pescatore.

THE WOOLLY CLEMATIS.
(CLEMATIS LANUGINOSA.)

[PLATE 94.]

THE WOOLLY CLEMATIS.

(CLEMATIS LANUG NOSA.)

A Very Fine Large-Flowered Hardy Climber, from CHINA, *belonging to the Order of* CROWFOOTS.

Specific Character.

THE WOOLLY CLEMATIS.—Leaves simple and ternate; leaflets coriaceous, cordate, acuminate, shaggy on the under side, as are the footstalks. Buds, peduncles, and young leaves buried in wool. Sepals six, ovate, acuminate, spreading flat.

THIS magnificent plant flowered in the nursery of Messrs. Standish and Noble, of Bagshot, who received it from Mr. Fortune. We have a wild specimen from that enterprising traveller, marked "Hills of Chekiang, July, 1850," and he has also favoured us with the following memorandum concerning it:—

"This pretty species was discovered at a place called Tein-tung, near the city of Ningpo. It is there wild on the hill-sides, and generally plants itself in light stony soil near the roots of dwarf shrubs, whose stems furnish it with support as it grows. Before the flowering season arrives it has reached the top of the brushwood, and its fine star shaped azure blossoms are then seen from a considerable distance rearing themselves proudly above the shrubs to which it had clung for support during its growth. In this state it is most attractive, and well repays any one who is bold enough to scramble through the brushwood to get a nearer view.

"The flowers of this species are much larger and more hairy than those of the Japanese *C. azurea grandiflora*, to which it bears some resemblance. It is no doubt equally

hardy, and perhaps more so. The situations and soil in which it is found wild will point out the true mode of managing it in our gardens."

It is no doubt very near *C. azurea*, from which it differs in the leaves being coriaceous not thin, shaggy beneath with white hairs not finely silky, and cordate not ovate; in the flower-buds, young leaves, and peduncles being buried in wool, not subpubescent, and in the great size of the flowers, whose divisions are broader and more acute.

GLEANINGS AND ORIGINAL MEMORANDA.

LÆLIA BELLA. A new hybrid Orchid of great beauty. It is said to be a cross between the old autumn-flowering *Cattleya labiata* and *Lælia purpurata*. In habit of growth, and the form and colour of the flowers, it partakes of the character of both parents, the merits of which are so well known to Orchid growers as to enable their forming some idea of the high character of the hybrid.

Leaves twelve inches long by two and a half broad, purple underneath; bulbs eight inches long. Sepals and petals broad, light lilac in colour. Lip with blunt angles, and a broad anterior wavy lobe of glorious warm purple, as well as the side angles, superior margins very light. There are two oblong ascending zones of light ochre-white at the base, and two similar spots before the middle, in the way of *Cattleya Warscewiczii*. Disk light purple, interrupted by light lines. Column white, with lightest purple on the side.—*Gardener's Chronicle*, N.S., vol. xxi., p. 174.

DECAISNEA INSIGNIS. A singular plant from the Eastern Himalaya, the fruit of which is edible. It belongs to the comparatively few species that have unisexual flowers. It is grown at Kew in the temperate house, where it flowered in May, 1883. The specimen there is, we understand, a male. This interesting plant is suitable for growing in a roomy structure where it can have the warmth of an ordinary greenhouse.

Trunk or trunks six to ten feet high; bark pale; branches few, subterminal, erect. Leaves terminal on the branches, two to three feet long, horizontal; petiole slender, terete, jointed on the stem; leaflets many pairs, four to six inches long, petiolulate, ovate or elliptic acuminate, green above, glaucous beneath, thin. Racemes terminal and axillary, a foot long, horizontal, many-flowered. Flowers drooping, green, one inch long, on slender pedicels as long as themselves; bracts subulate, minute. Perianth campanulate; segments lanceolate, acuminate. Male flower:—Stamens six, filaments united into a cylindric column bearing the adnate two-celled anthers at the tip; anther cells oblong, disconnected, bursting by dorsal slits, connective produced into a long erect subulate horn. Female flower:—Carpels three, erect, linear, cylindric, with discoid sessile stigmas, surrounded at the base by six subsessile abortive free anthers; ovules many, two-seriate on the ventral suture. Ripe carpels three, three to four inches long by one to one and a half in diameter, cylindric, spreading and recurved, golden yellow, fleshy, full of white sweet pulp; pericarp fleshy, with yellow juice, coarsely granulate externally. Seeds numerous, two-seriate, suborbicular or oblong, flattened, one-half to three-quarters of an inch in diameter; testa hard, brown, shining; embryo minute, in horny albumen.—*Botanical Magazine*, 6731.

CANNA WARCZEWICZII. *Dietrich.* A handsome hothouse perennial, belonging to the order of Marants. Flowers scarlet. Native of Central America. Introduced by M. Von Warczewicz.

C. foliis ovatis vel ovato-oblongis cuspidato-acuminatis glabris margine caulesque coloratis, germine subgloboso papilloso colorato, calycis phyllis lanceolatis obtusis coloratis rore glauco adspersis, labio superiore corollæ limbi interioris bipartito, laciniis obverse lanceolatis obtusis, labello revoluto anguste spathulato obtuso apice emarginato, stylo lineari.

This is one of the many plants discovered by M. Von Warczewicz, who brought its seeds with him from Central

America. It is very beautiful, especially as the stalks, and more particularly the peduncles and pedicels, flower-bud, calyx, and bracts, are of a blood-red colour, and are covered with a bluish bloom. The flowers are bright scarlet. The plant belongs to that division of the genus which has a bifid upper lip, as in *Canna speciosa, discolor, occidentalis, compacta, carnea*, &c.—*Allgem. Gartenzeit.*, Sept. 13, 1851.

OLEARIA PANNOSA. *Hooker.* A half-hardy evergreen shrub, native of New Holland. Belonging to the order of Compositæ. Flowers white. Introduced by W. H. Fox Talbot, Esq. (Fig. 237.)

The only notice of this plant is to be found in Sir W. Hooker's *Icones plantarum* t. 862. In that admirable collection of charming botanical sketches, an *Olearia grandiflora*, from Adelaide in S. Australia, is figured with solitary flower-heads and large white rays. At the same time mention is made of this, as a plant found near the Murray river in South Australia; but by mistake the flowers are described as purple. In reality they are pure white, with a yellow centre. The whole plant is covered with a close white felt, except the upper side of the leaves, which are bright green and shining, with only a little cobwebby matter here and there.

VANDA TERES (LINDL.) AUROREA. A distinct form of this fine old Vanda, still one of the most distinct and beautiful of all the genus. We understand it has appeared in Sir W. Marriott's collection.

Sepals and petals white, the latter with a light hue of rose. Lip lightest ochre-coloured in the throat, rose on the lobes, with two rows of small purple dots. Column light rose-purple.—*Gardener's Chronicle*, N.S., vol. xxi., p. 271.

VANDA PEDUNCULARIS. *Lindley.* A hothouse epiphyte from Ceylon, with distichous two-lobed leaves, and brown and purple bee-like flowers. Blossoms in March. Introduced by G. Read, Esq. (Fig. 238; *a*, the flower slightly magnified; *b*, the pollen-masses and caudicle.)

This plant was first found by the late Mr. James Macrae in Ceylon, growing on the bark of trees. The flowers are pale green, or yellowish, rather sweet-scented, with a deep purple fleshy lip bordered with green, and hairy at the edges so as to resemble some of the species of Ophrys. Growing in racemes, from six to twelve together, from the thickened ends of peduncles sometimes as much as three feet long and even furnished with side branches, these flowers wave about in the air with all the appearance of animal life, and are quite as much like hairy insects as our own wild Bee and Spider Orchises.

In some respects this is not a true Vanda; the pollen-masses are absolutely double, and not hollowed out on one side, the caudicula is unusually long and slender, and the lip is in no degree saccate—on the contrary, it is flat, firm, and fleshy. We do not, however, at present think it expedient to separate it, whatever may happen whenever the distichous-leaved East Indian Orchids shall be thoroughly reinvestigated.

SACCOLABIUM BELLINUM. In this new species of Saccolabium we have a beautiful miniature Orchid, taking up little room, and well deserving a place in any collection. The fact that it is a winter-flowering kind (it blooms in January) enhances its value. It requires a warm house to grow in, being a native of Burmah.

Leaves like those of *S. calceolare*. Flowers two or three times larger than that species. Sepals and petals straw-colour, with large dark brown blotches. Lip's blade transverse, much serrate, fleshy, rough, with two great cushions of filiform processes at the base. Basilar hollow not so deep as in *S. calceolare*. Lip and column white, with mauve-purple blotches. —*Gardener's Chronicle*, N.S., vol. xxi., p. 174.

PRIMULA PROLIFERA. In this we have another addition to the now numerous

species of Primula. It is a strong robust plant; the leaves, which attain as great a length as eighteen inches, appear to be somewhat erect in habit; the flowers, yellow in colour, appear in whorls, four or five in number, and are borne on tall erect scapes. The plant, which was figured in January, 1884, in the *Botanical Magazine*, seems to have been raised by Mr. Isaac Anderson Henry, from seeds collected by Mr. Elwes, at a great elevation in the Sikkim Himalaya; the example in question flowered out of doors at Kew, in the summer of 1883.

Rootstock stout; leaf-buds mealy, with straw-coloured powder, like that of the inflorescence. Leaves six to sixteen inches long by one to three broad, narrowly obovate-oblong, obtuse, wrinkled, irregularly toothed or nearly entire, glabrous or puberulous beneath. Scape six to twenty inches high, sometimes as thick as a goose-quill, strict, erect, with two to six superposed rather distant whorls of faintly sweet-scented flowers; bracts small, lanceolate, or of the lowest flowers elongate linear-lanceolate spreading and recurved; pedicels one-third to an inch long. Calyx hemispheric; lobes triangular, or subulate in small forms. Corolla pale golden yellow, tube much longer than the calyx, a quarter to half an inch long, cylindric; limbs three-quarters of an inch in diameter; lobes spreading, obcordate, mouth more or less annulate. Anthers small, oblong. Ovary globose; style slender, stigma capitate. Capsule globose, hardly exceeding the calyx; crown horny, with five split valves. Seeds granulate.—*Botanical Magazine*, 6732.

CERASUS ILICIFOLIA. *Nuttall.* A hardy evergreen bush or small tree. Flowers white. Belongs to Almondworts. Introduced by the Horticultural Society. (Fig. 239.)

Found in California in the first instance by Mr. Nuttall, then by Coulter, and afterwards by the officers of H.M.S. *Blossom*, and last by Hartweg, who reports the fruit to resemble a small cherry. This is a most valuable evergreen, apparently as hardy as a Laurel, and having the foliage of a holly, with the flowers of a Bird-cherry.

MEDINILLA CURTISII. Cultivators who are only acquainted with the genus Medinilla through such species as the strong-growing *M. amabilis*, or *M. speciosa*, can form little idea of the plant under notice, which is quite a slender grower, with proportionately small foliage.

It is a pretty species from Sumatra, quite distinct in appearance, and will most likely succeed under conditions of temperature, soil, and moisture that are found to answer for the kinds previously in cultivation—*i.e.*, the conditions required for ordinary warm stove plants.

A shrub, branches slender, cylindric, obscurely warted, branchlets pendulous. Leaves three to three and a half inches long, sessile, oblong or ovate-oblong, acuminate, three-nerved, thinly coriaceous, bright green with a scarlet midrib and margins. Cymes pyramidal, peduncled, pendulous; peduncle two to four inches long; bracts minute at the bases of the divaricate branches, the lower of which are one to two inches long and horizontal, flowering near the tips only; pedicels a quarter of an inch and upwards, minutely bracteolate; peduncle, rachis, and pedicels coral-red. Flowers white, one-half to two-thirds of an inch in diameter. Calyx white, globose, fleshy; limb short, truncate, obscurely five-toothed. Petals nearly orbicular, concave, imbricate, ivory-white. Anthers purple.—*Botanical Magazine*, 6730.

ILEX PERADO. *Hort. Kew* (*alias* I. platyphylla, *Webb and Berthellot*). A hardy evergreen tree, with broad, flat foliage, and bright red fruit. Native of the Canary Islands. Flowers white in June. (Fig. 240.)

An old inhabitant of our greenhouses, but to all appearance perfectly hardy near London. The first published account of it is to be found in *Plukenet's Almagestum* (t. 262), where it is represented under the name of "Aquifolium amplissimis foliis ex insulis Fortunatis." In the first edition of the *Hortus Kewensis* it was placed among other Hollies as *Ilex Perado*, by which designation it was universally known, until Messrs. Webb and Berthellot called it *I. platyphylla*, supposing *Ilex Perado* to be the same as the *I. maderensis* of Lamarck, for which we find no sufficient authority. The Perado of Kew was a garden plant, and has descended to our days in the form which is now represented. According to the learned authors of the "Natural-History of the Canaries," this plant grows in the dense forest of Agua Garcia in the Canaries, where it forms a pyramidal tree twenty feet high, and is called Naranjero Salvage. They believe it to be strictly a Canary plant, and not to be known in Madeira. In gardens the species resembles a broad, flat, roundish-leaved Holly, with little or no toothing on the margin. The flowers are white, numerous, much larger than in *I. aquifolium*, and are succeeded by bright red spherical berries. It is a truly noble evergreen.

240

ÆSCHYNANTH, THE SPECIES OF.

At p. 78 of our present vol. we gave a list of the species of this genus extracted from the *Allgem. Gartenzeitung*, where two kinds were named as doubtful. Concerning these, we have received the following memorandum from Mr. Moore, of the Apothecaries' Garden, Chelsea.

ÆSCHYNANTHUS DISCOLOR. Leaves elliptic, acuminate, obsoletely sinuate-dentate, glabrous, fleshy, veinless.

masculis axillaribus solitariis, racemosis, folio subtriplo brevioribus; rachibus angulato-alatis, alis brevissimis, minutissime puberulis; floribus solitariis bracteisque duabus ad basin pedicelli purpureis; perigonii turbinato-rotati laciniis ovato-oblongis, subobtusis, patentissimis; staminibus 3 brevissimis, arcte approximatis, centro disci atro-purpurei hexagoni insertis; antheris introrsis bilocularibus post dehiscentiam saturate aureis; rudimento stylino nullo.

Although it is not easy to class a dicœcious plant, of which only one sex is known, and that with scarcely characters enough to authorise its being made the basis of a new genus, yet I think that in the present case there are two characters sufficient for this purpose: the presence and form of the sheath of the male flowers, and the presence of two unequal great bracts at the base of each peduncle. As to the species, there is the cylindrical twining stem, the thickness of a crow-quill. The petiole, also cylindrical, two to three inches long, and thickened both at the top and the bottom. The leaf oval and heart-shaped, with a long pointed apex, nine-nerved, three to three and a half inches broad, and three to four inches long, counting from the insertion of the petiole to the point, whilst the two side lobes at the base project six to nine lines beyond the point of insertion. Besides, hitherto no species of Helmia has been found which has an axillary raceme as short compared with the size of the leaves as that of the plant now in question. Upon this lie the dark yellow-red and carmine corollas. The corolla is as long as the calyx, as are also the style and stamens, which latter have red filaments and bluish anthers. The bulbs of this plant are similar in shape and size to that of *Dioscorea alata*, and were received by M. Mathieu, of Berlin, from M. Von Warczewicz, who discovered them in Central America.—*Klotzsch, in Allgem. Gartenzeit.*, Dec. 13, 1851.

ACANTHOSTACHYS STROBILACEA. *Klotzsch* (*alias* Hohenbergia strobilacea, *Schultes*). A curious perennial, with very narrow spiny leaves, like the Pine Apple, and a short prickly cone of yellow flowers in orange-coloured bracts. Belongs to Bromeliads. Native of Mexico. (Fig. 242.)

According to Mr. Otto, this comes from the southern provinces of Brazil, where it was first found by Martius, and afterwards by Sello. It flowers in the stove in June and July, in equal parts of sand and decayed vegetable mould. A second species is *Hohenbergia* (*Acanthostachys*) *capitata*, also from Brazil. One of the great peculiarities of this genus is its having its ovules in pairs only, and not in crowds on the edges of an axile placenta; it is inferior-fruited, like Ananassa itself. The leaves are very long and narrow, thick, curved, prickly, channelled, and scurfy. The scape is long, simple, mealy, and bears at the base of the prickly spike (or cone) a pair of very long channelled leafy spathes. —*See Link, Klotzsch, and Otto's Icones.*

242

THE FIERY-RED MORMODES.
(MORMODES IGNEUM.)

[PLATE 95.]

THE FIERY-RED MORMODES.

(MORMODES IGNEUM.)

A Hothouse Epiphyte, from CENTRAL AMERICA, *belonging to the Natural Order of* ORCHIDS.

Specific Character.

THE FIERY-RED MORMODES.—Raceme long, many-flowered. Sepals reflexed, petals ascending: both lanceolate, flat, very acute. Lip stalked, fleshy, with a distinct point, rolled back at the sides, scarcely angular, with a transversely elliptical outline.

THIS fine plant and several others of the same genus have been produced from the *rejectamenta* of one of Mr. Warczewicz's sales. We received from Mr. Rucker five sorts of Mormodes, all derived from the same source, all in flower, and all new. Of these we represent three.

That in the middle of our plate, to which the name of *igneum* is given, was conspicuous for the greater size of its parts, and for its intense colouring. A stiff stalk, about a foot high, bore a dozen large fleshy flowers, of which the sepals and petals were alike chocolate-coloured, and the lip a rich fiery orange-brown. There was no streaking or spotting in any part of the surface. The sepals were flat, linear-lanceolate, very sharp, and spread flat out, even turning backward after a time; the petals, on the contrary, were erect, and somewhat broader. The lip, a tough fleshy body, when spread out had an elliptical outline, with a major axis transverse, and the edge extended into a triangular point on one side; in its natural condition it was rolled back, and folded so as to look as if angular, though not really so.

The sorts marked B and C in the plate accompanied it. B had dingy red flowers,

marked with lines of dots; and C had dark lake flowers, speckled irregularly with red, but not dotted; their lips were thinner, smaller, and had a decidedly angular outline.

The two other kinds, not figured, were the same in habit; but neither had any dots; one had faint stripes along the sepals and petals, which were dirty pink, and the lip was a dull green; the other had a much yellower flower; in both the sepals and petals were as in B and C, but the lip was much larger, thinner, and still more decidedly angular.

Are these forms to be regarded as distinct species? and are they new, or are they varieties of some species already known? There grows in the temperate parts of the snow-capped mountain ridge of Santa Martha, especially on the branches of an Erythrina, a Mormodes of which travellers speak as being most remarkable for the infinite variety of its colours. A striped state of it having flowered at Syon some years since, Sir William Hooker published it in the *Botanical Magazine*, t. 4214, and called it *Cartoni*, under which name it is current in gardens. Of that plant we entertain no doubt that our figured B and C are mere varieties. The main figure, so resplendent in colour and striking in dimensions, seems to differ in its broader and more fleshy sepals and petals, and in its thicker and more leathery lip, which has little of the angularity which belongs to *M. Cartoni*; we therefore distinguish it under the name of *M. igneum*. As for the other varieties above alluded to and not figured, they probably belong to the *M. flavidum* of Klotzsch.

It is not improbable, however, that all these plants are one and the same species; and if so the *M. lentiginosum* of the *Botanical Magazine*, t. 4455, will have to be added; for beyond colour the plant seems to have nothing to distinguish it except the total absence of all angularity in the lip. The same principles which justify the separation of that plant equally authorise the distinction of *Cartoni*, *igneum*, and *flavidum*; and also the separation of a small species with rather more membranous pallid flowers, also from Santa Martha, and now in our gardens, the lip of which is rolled up into a slender pipe, but which when flattened has much the form of a sharp trowel. We received it from an anonymous correspondent at Buckland, in Berkshire, and propose to distinguish it with the following name and character:—

M. convolutum; sepalis petalisque linearibus reflexis, labello tereti convoluto unguiculato apiculato incurvo lævi ambitu hastato angulis abbreviatis et igitur trullæformi.—*Santa Martha*.—Flowers, the smallest yet known in the genus, dull yellow, spotless.

THE AZORIAN FORGET-ME-NOT.
(MYOSOTIS AZORICA)

[PLATE 96.]

THE AZOREAN FORGET-ME-NOT

(MYOSOTIS AZORICA.)

A Brilliant Half-Hardy Perennial, from the AZORES, *belonging to* BORAGEWORTS.

Specific Character.

THE AZOREAN FORGET-ME-NOT.—Stem decumbent, much branched, covered all over with close bristly reflexed hairs. Leaves spreading, the hairs on the upper side close pressed, on the under side turned backwards; the lower oblong-spathulate, the upper oblong and obtuse. Racemes dense, without bracts, forming corymbs when flowering. Calyx nearly five-parted as long as the erect footstalk, covered with close-pressed hairs, eventually spreading, and as long as the tube of the corolla. Nuts very smooth.

Myosotis azorica: *H. C. Watson, in Botanical Magazine*, t. 4122.

"THIS beautiful Forget-me-not is found about waterfalls, and on wet rocks with a north-east aspect, in the islands of Corvo and Flores, the most westerly of the Azores. Its proper habitat appears to be on the mountains; though it comes down nearly to the sea-shore, following the course of rocky mountain streams, where the atmosphere is kept humid by the spray of the water. The deep rich blue of its numerous flowers, and their long succession from the lateral branches, combine to render this species well deserving of cultivation. It will require a loose, peaty, or sandy soil, careful shading from the midday sun, frequent sprinkling with water, and must be covered with a glass in dry weather. Under this treatment a plant of it in my garden has completely filled with its numerous stems a square hand-glass, twenty inches to the side, and twenty-four inches in depth; and apparently it would have grown larger, had space allowed the free development of the lateral branches, which are much cramped by the glass. It will bear some frost, but may

likely prove more impatient of cold than our native species of the genus. In a Wardian case it would probably succeed very well."

Such is the account given of this charming plant by Mr. Hewitt Watson, its discoverer. We find it thrive perfectly well in a greenhouse, among Heliotropes and Pelargoniums, where it ripens its little black glossy nuts (seeds) in tolerable abundance. The play of colour in the many tinted flowers and flower-buds is scarcely rivalled by anything in cultivation.

GLEANINGS AND ORIGINAL MEMORANDA.

CESTRUM BRACTEATUM. *Link and Otto* (*alias* C. stipulatum, *Vellozo*). A green-flowered, greenhouse shrub. Native of Brazil. Belongs to Nightshades. (Fig. 243.)

This species is remarkable for the large size of its greenish bracts, which extend from the calyx as far as the limb of the corolla. It forms a stout branching shrub, five to six feet high, with green downy branches. The leaves are pale green, lanceolate, wavy, with rather conspicuous veins, and bear at their base a pair of roundish green ears, which have been called stipules by Graham, and the scales of axillary buds by Dunal. The flowers are slightly downy, pale green, in short spikes or fascicles, and when young are concealed by the great downy glumaceous bracts in which they are enveloped. According to Dunal the species inhabits the open deciduous forests of Brazil. Being as destitute of odour as of colour it is of little horticultural interest.

243

LOTUS PELIORHYNCHUS. In this plant we have a very pretty greenhouse shrub with elegant habit; the growth is almost as slender as that of *Tetratheca* (*Tremandra*) *verticillata*, to which it is not unlike in general appearance, except the flowers, which are wholly different in form and also in colour, which is red with a dash of crimson in it. The plant comes from Teneriffe, and flowered at Kew in May, 1883. Its gracefully drooping shoots are clothed with quantities of narrow thread-like leaves that contrast well with the bright coloured flowers, which are borne in quantities towards the extremities of the principal shoots. Ordinary greenhouse treatment will be all that it requires.

A small slender bush, clothed with silky pubescence, giving it a silvery hue. Branches decurved, woody, slender. Leaves rather crowded, spreading, sessile; leaflets two-thirds to three-fourths of an inch long, filiform. Flowers one and a half inches long, axillary, loosely crowded on short shoots towards the ends of the branches, solitary or two together, very shortly pedicelled. Calyx three-fourths of an inch long, green, silky, tube subcampanulate, five-angled, cleft to the middle into five ovate-lanceolate acuminate falcate lobes, of which the two upper are much the largest. Corolla scarlet. Standard narrowly lanceolate, sharply recurved like a horn. Wings shortly clawed, much broader and rather longer than the standard, dimidiate-lanceolate, subacute, cordate at the claw; keel longer than the wings, incurved, narrowed to a long point. Staminal tube long, slender. Style unequally cleft into two subulate arms.—*Botanical Magazine*, 6733.

BEGONIA PUNCTATA. *Link, Klotzsch, and Otto.* A hothouse perennial with panicles of pink flowers. Belongs to Begoniads. Native of Mexico. (Fig. 244.)

A handsome stemless herbaceous plant, with a creeping rhizome. The leaves are cordate, cut into about seven toothed palmate lobes bordered with fine bristles, slightly hairy on each side, dark green on the upper, pale green on the under side, with a tinge of red towards the edge; their stalks are furrowed, covered with spreading hairs, and furnished with a purple ramentaceous collar just beneath the lamina. The sepals are in pairs, oblong, a little narrowed to the base, bright rose-coloured, with deep red spots on the outside. Fruit dotted with scarlet, the wings rounded, one being very large and bright rose-colour. This plant, figured in *Link, Klotzsch, and Otto's Abbildungen*, is very near *B. heracleifolia* and *crassicaulis*. The former differs in having clear green, smaller, and more deeply cut leaves, crenate bracts, and unspotted flowers; the latter in blossoms without leaves, white flowers, small oblong leaves, and perfectly circular sepals. They all have the same great double placenta, and belong to the section (?) Diploclinium.

244

DENDROBIUM SIGNATUM. *H. G. Reichenbach, f.* This is an introduction of Mr. Bull's, who, we understand, has imported it from Siam. It will most likely be found to thrive under conditions such as answer for other species of Dendrobe indigenous to warm countries—plenty of heat, light, and moisture, with a little shade in the growing season, followed by a lengthened period of rest without water, and in a lower temperature.

Inflorescence at present one-flowered. Chin very blunt-angled. Sepals ligulate, acute. Petals broader acute, both reflexed, lightest ochre-white to white. Lip shouldered at the base, being nearly square and narrow; sulphur coloured, with a light longitudinal line at the base. The disk is adorned by a broad transverse radiating brown blotch, and on each side of the basilar part there are four similar brown lines, going out nearly at right angles, and running nearly parallel. The column has two small apiculi at the top, and angles at the side of the stigmatic hollow; light green, with some mauve longitudinal lines under the stigmatic hollow.—*Gardener's Chronicle*, N.S., vol. xxi., p. 306.

CALOPOGON MULTIFLORUS. We understand Mr. B. S. Williams, of the Victoria Nursery, Holloway, has imported and succeeded in blooming this Orchid, a rare occurrence, if not the first time it has been flowered in this country. From the description given by Professor Reichenbach, it must be not only quite distinct in appearance, but a handsome flower as well.

The individual flowers are comparable to those of a diminished *Bletia verecunda*. They are of the finest amethyst-purple. The stalk of the lip has on each side, at the base, an auricle, and on the broad, irregularly square, retuse, emarginate, anterior blade there is at the base a rich tuft of hairy lamellæ, golden-yellow, often purplish at the base; and before these are some purple calli.—*Gardener's Chronicle*, N.S., vol. xxi., p. 338.

ECHEVERIA BRACTEOSA (*alias* Pachyphytum bracteosum, *Link, Klotzsch, and Otto*). A glaucous succulent undershrub. Native of Mexico. Flowers green and red. Belongs to the order of Houseleeks. Blossoms in January and February. (Fig. 245.)

245

This very fine species was sent to the Royal Botanic Garden, Berlin, in 1838, from Mexico, by Mr. Charles Ehrenberg. Dr. Klotzsch, in publishing it in his *Abbildungen*, compared it with the genera Cotyledon and Pistorinia, from which it is very different, and overlooked that of Echeveria, forming it into a new genus, which he called Pachyphytum. It is, in fact, nothing whatever more than an Echeveria with a large fleshy calyx. The whole plant is covered with a thick glaucous bloom. The leaves grow in rosettes at the end of a short fleshy stem, are flat, obovate, obtuse, almost a quarter of an inch thick. From amongst them rises a slender leafless peduncle, clothed with narrow spathulate deciduous fleshy scales, and bearing at the end a recurved one-sided close raceme. The sepals are oblong, erect, united at the base into a short cup, rather unequal, and considerably longer than the dull red petals.

PHACELIA CAMPANULARIA. This is a low growing annual, bearing lovely blue campanulate flowers, over an inch in diameter. They are produced in cymes at the extremities of the shoots, which grow to a height of eight or ten inches. They open in succession, and are of the most intense deep shade of colour. The plant blooms in summer, and coming as it does from Southern California, it will no doubt succeed with treatment such as required by ordinary annuals that are sown in the open air in spring in the usual garden soil. It appears to have been raised by Mr. Thompson, of Ipswich, a very successful cultivator of out-door plants.

A glandular-pubescent annual, six to ten inches high, branched from the base; branches rather stout, succulent, brown. Leaves long-petioled, all subsimilar, one to two inches long, rounded ovate or cordate, obtuse, coarsely sinuate-

crenate, hairy on both surfaces; petiole as long as the blade, stout. Cymes simple, terminal, lax-flowered. Flowers pedicelled, one to one and a quarter inches in diameter. Calyx segments linear, obtuse, hairy and glandular, shorter than the corolla-tube. Corolla exactly campanulate, deep bright blue within, pale without, throat with five small oblong white spots within opposite the sinus; lobes rounded, short, spreading and recurved. Stamens far exserted; anthers small, oblong. Ovary pubescent, bearded at the top, cells many ovuled; style capillary, with two long capillary arms.—*Botanical Magazine*, 6735.

HUNTLEYA CERINA. A beautiful stove Orchid from Central America. Flowers pale yellow, with a purple column, in April. (Fig. 246.)

H. cerina; sepalis subrotundis concavis, labello ovato convexo retuso cristâ crassâ semi-circulari truncatâ plicatâ, columnâ apice nudâ.

A species of the curious genus Huntleya, neither with brown nor violet flowers, but with firm whitish waxy blossoms, not unlike those of *Maxillaria Harrisoniæ*. It was found in Veragua by Mr. Warczewicz, on the Chiriqui Volcano, at 8,000 feet above the level of the sea, and was sold by auction by Mr. Stevens some time in 1851. Mr. Rucker was the first to flower it. Its manner of growth and general appearance are those of *Huntleya violacea*. The flowers rise singly from the base of the leaves upon a peduncle about six inches long, with a few short tubular close-pressed scales near the base; they are very fleshy, nearly circular, concave, and about three inches across. The sepals and petals are rounded, and even at the edge, of a very pale straw-colour. The lip is somewhat ovate, convex, indented at the point, much more yellow, and furnished near the base with a deep thick semi-circular ruff, composed of numerous plaits and folds. The column is deep violet near the base, and has no expansion or hood over the anther.

246

CRINUM ZEYLANICUM, VAR. REDUCTUM. *Baker*. Most of the Crinums common in cultivation are remarkable for their long, somewhat straggling foliage, a natural habit which is the reverse of being an advantage from a gardening point of view. The plant in question is a decided improvement in its comparatively short leaves. It flowered at Kew in the autumn of 1883, having, we understand, been received there from Zanzibar. It is thus described by Mr. J. G. Baker:—

Bulb two inches in diameter, neck two inches long. Leaves ensiform, spreading horizontally, one to one and a half feet long, eighteen to twenty-one lines broad, narrowed gradually from the middle to the apex. Peduncle lateral, green, terete, under a foot long; flowers four to an umbel, sessile; spathe-valves two, green, deltoid, three inches long. Perianth with a cernuous green tube five to six inches long, and a limb three to three and a half inches long; segments elliptic, acute, connivent, one to one and a quarter inches broad, white, with a red central band, just as in typical *zeylanicum*. Stamens declinate, nearly as long as the perianth.—*Gardener's Chronicle*, N.S., vol. xx., p. 618.

[PLATE 97.]

THE PURPLE-STAINED LÆLIA.

(LÆLIA PURPURATA.)

A Magnificent Stove Epiphyte, from ST. CATHARINE'S, *in Brazil, belonging to the Order of* ORCHIDS.

Specific Character.

THE PURPLE-STAINED LÆLIA.—Pseudobulbs oblong, Leaves narrowly oblong, emarginate. Peduncles two-flowered, proceeding from a spathe. Sepals linear-lanceolate; petals oblong-lanceolate, obtuse. Lip very large, rolled under the column, rounded, the lateral lobes very obscure and hardly distinguishable from the middle one.

THIS plant was first produced by Messrs. Backhouse, of York, at one of the garden meetings of the Horticultural Society, under the name of a new Cattleya from the island of St. Catharine's, in Brazil. It had, in fact, much the appearance of *Cattleya crispa*, or of a white *C. labiata*, but the experienced eye of one of our most accurate Orchidophilists suggested to him at the first glance that it was probably a Lælia related to *L. Perrinii*. And such it proved to be when the pollen-masses were examined; they are eight, not four.

The pseudobulbs are oblong, and produce at their end a narrow oblong blunt leaf, as broad at one end as the other, about eight inches long, and deeply notched at the point. In the axil of the leaf comes a compressed pale green spathe fully three inches long, and much like that of *Cattleya labiata*. The peduncle which appears from within this is stout, deep-green, and two-flowered. The flowers are rather more than six inches from the tips of the petals. Sepals and petals pure white; the former linear-lanceolate, rolled back

at the edge towards the base and thus appearing unguiculate; the latter three times as broad, ovate-oblong, obtuse, wavy. The lip is three inches long, rolled round the column, with a much-rounded point from which the rounded lateral lobes are hardly distinguishable; it is yellow in the middle towards the base and streaked with crimson, but the limb is of the deepest and richest purple, diminishing in intensity towards the edge.

It is evidently very near the *Lælia grandis*, another Brazilian species; but that species is represented to have a leaf broader at the base than the point, and nankin-coloured flowers, with a white lip washed with rose at the base; the sepals and petals are also narrower, more wavy, sharper, the latter serrulate, and the lateral lobes of the lip very distinct and ovate.

The vignette represents the plant as it was exhibited at Chiswick.

THE SCARLET SALPIGLOT.
(SALPIGLOSSIS COCCINEA.)

[PLATE 98.]

THE SCARLET SALPIGLOT.

(SALPIGLOSSIS COCCINEA.)

A Beautiful Half-Hardy Annual, of GARDEN ORIGIN, *belonging to the Natural Order of* LINARIADS.

THIS plant seems to differ from other Salpiglots in nothing except colour, which is here of a clear vivid tender scarlet, charmingly relieved by short veins of a deeper colour. As a garden plant it possesses high claims to distinction, for there are few annuals that equal it.

In a botanical point of view it seems to confirm Mr. Bentham's opinion that all the so-called species of the genus, known by the names of *atropurpurea, straminea, picta,* and *Barclayana,* are mere forms of one wild but variable species, the *S. sinuata* of the *Flora Peruviana,* among which there is in reality no character available for specific distinction.

GLEANINGS AND ORIGINAL MEMORANDA.

CATTLEYA (LABIATA, &c.) SPECIOSISSIMA REGINA. Few species of Cattleya have produced so many grand varieties as *C. speciosissima;* and the form under notice here must, by the description, be one of the finest. It is, we understand, in the possession of Sir Trevor Lawrence, whose magnificent collection is alike remarkable for the rarities it contains as well as for the excellence of their cultivation. All the varieties of *C. speciosissima* thrive best with a little more warmth than the generality of Cattleyas require; they should be kept standing as near the glass as possible in a thoroughly light house. Under such conditions they not unusually make two growths and flower twice a year.

It has broad sepals, immense petals, a great column, and relatively small lip. Lateral light yellow eye-spots, a reddish ferruginous line between the light rose side laciniæ, a dark mauve-purple anterior lacinia. The beauty consists in the rich purple colour of ovary, column, sepals, and petals. I have only once seen such a colour in Mr. Thompson's celebrated Cattleya, which is totally distinct by its shape.—*Gardener's Chronicle*, N.S., vol. xxi., p. 372.

LACHENALIA TIGRINA, VAR. WAREI. *Baker.* This is no doubt a handsome and distinct variety, deserving a place with the other known kinds that are so effective for decorative purposes in the winter and early spring months. The little extra warmth they require to bring them into flower early is not the least merit they possess. The subject of our notice is, we understand, in the hands of Mr. Ware, of Tottenham, well known as one of the most extensive and successful cultivators of hardy out-door plants.

Leaves two, oblong-lanceolate, four to five inches long, with copious darker green round spots on a dull glaucous green groundwork. Scape green, sparingly mottled with bright red-brown. Flowers ten to twelve, in a dense raceme; pedicel yellow, one-eighth to one-sixth of an inch; bracts lanceolate, longer than pedicel. Perianth one and one-eighth of an inch long; outer segments two-thirds as long as the inner, bright red at the base, bright yellow in the middle, tipped with green; inner segments protruding one-third of an inch beyond the outer, the orbicular blade one-third of an inch broad, greenish-yellow, with a reddish-brown margin.—*Gardener's Chronicle*, N.S., vol. xxi., p. 372.

STROBILORACHIS GLABRA. *Link, Klotzsch, and Otto* (*alias* Strob. prismatica, *Nees; alias* Ruellia prismatica, *Vellozo; alias* Harrachia macrothyrsus, *Martius; alias* Justicia imbricata, *Pohl*). A hothouse shrub, with green cones of bracts and pale yellow flowers. Native of Brazil. Belongs to Acanthads. (Fig. 247.)

This plant has something of the habit of an Aphelandra. The leaves are oblong-lanceolate, acuminate, convex, wavy, bright green. The flowers are arranged in four-cornered cones, four or five inches long, formed of strongly-keeled ovate green bracts, from within which appear pale yellow bilabiate corollas, having a truncate two-lobed upper lip, and a three-lobed lower lip, the middle lobe of which is broader and more blunt than the laterals. The species is by no means infrequent in continental gardens, to which it was introduced from Berlin. Its native place appears to be damp shady places on the Corcovado Mountain in Brazil, and in many similar places near Rio Janeiro. We are at a loss to understand upon what principle the name first given to the plant by Dr. Klotzsch was altered by Professor Nees von

Esenbeck. It is a rule, no doubt, among some botanists to insist upon the retention of the first specific name that is published, however erroneous may have been its reference to a particular genus: the second name being held to be unchangeable whatever may happen to the first. But we dispute the propriety of this plan, and refuse to acknowledge any sufficient authority for the practice, which is sometimes impossible, very generally inconvenient, and not unfrequently absurd. Nothing is more common than for an unskilful botanist to refer a plant to a wrong genus. Another succeeds him, places it in its right genus, but with a new specific name, the first being undiscoverable on account of the original blunder with which it was associated. Then comes in a third gentleman, who takes upon himself to cancel half the first genuine name in favour of half the previous inaccurate name, and thus introduces a third name into the overburthened pages of science. For example: A publishes in 1840 a certain QUERCUS *lignea;* B finds the plant in 1842, recognises it to be a Juglans, not a Quercus, and gives it to the world as JUGLANS *lamellata;* then uprises C, and coolly changes B's name into JUGLANS *lignea,* upon the ground that *lignea* has a right of priority over *lamellata!* The first admissible name was in such a case *Juglans lamellata,* and to that alone, as a whole, the right of priority attaches. Naturalists cannot concede to anyone a right to interfere in the name which may be given by the first author whose entire designation is admitted to be in itself unobjectionable. For the same reason, when several new genera are founded at the expense of some old one, no one can be held to be bound to preserve all the old specific names which he may find. The new names may be wholly new, and need not be half old and half new. All naturalists of experience will preserve ancient specific names for modern genera when it is desirable, but no one can be bound to do so. It is a mistake to quote the authority of Linnæus in this matter, for his practice was precisely that for which we contend. For example: his Rheum *Rhabarbarum* had been previously called Rhabarbarum *sinense* by Ammann; his Butomus *umbellatus* was the Juncus *floridus* of his predecessors; his Baccharis *halimifolia* was the Senecio *virginianus,* &c., of Ray, and the Argyrocome *virginiana* of Petiver; his Othonna *pectinata* was the Jacobæa *absinthites* of Plukenet; and so on in hundreds of instances. We therefore cannot acquiesce in Professor Nees von Esenbeck's change of Klotzsch's original name of Strobilorachis *glabra* into S. *prismatica,* for no better reason than that somebody (in this instance an ignorant Portuguese friar) had previously called it *Ruellia* prismatica.

MASDEVALLIA MOOREANA. According to Professor Reichenbach, this new species is nearly related to the well-known *M. elephanticeps,* but smaller in every way. It will most likely be found to thrive under like conditions to the majority of the other species, that is, with more water at all times than the generality of Orchids require, but especially during the growing season; also with more air and a cool temperature.

PENSTEMON LABROSUS. A very distinct species, from Mount Pinos, in Southern California, where it grows at a high elevation. The flowers are much more slender in the tube than those of most of the varieties now so plentiful in gardens. They are brilliant

scarlet in colour, and are produced in tall slender erect spikes, from three to four feet high. The plant will most likely require a little protection from our severest winters, such as the ordinary kinds of Penstemon need. This is another of Mr. Thompson's (of Ipswich) beautiful out-door plants.

Quite glabrous. Stem three to four feet high, slender, erect, twiggy. Leaves lower four to five inches long by a quarter to half an inch broad, narrowly oblanceolate; upper leaves shorter, quite linear. Panicle of long slender lax-flowered racemes; rachis and branches very slender, stiff, erect. Flowers one and a half inches long, horizontal or ascending. Calyx one-fourth of an inch long, sepals ovate, acute, upper smaller, all appressed. Corolla scarlet; tube narrow; lobes half the length of the tube; throat glabrous. Stamens as long as the corolla, filaments quite glabrous, anther-cells divaricate. Ovary glabrous; style filiform, glabrous, stigma entire.—*Botanical Magazine*, 6738.

PASSIFLORA ALBA. *Link & Otto.* A stove climber, with white flowers. Native of Brazil. Blossoms freely from May to September, and produces an abundance of fruit the size of a Walnut. (Fig. 248.)

248

Stem twining like that of other Passion-flowers. Leaves smooth, three-lobed, heart-shaped at the base, five-nerved, with oval lobes having mere glandular serratures at the base; a pair of glands grows on the middle of their stalk. The stipules are cordate and half stem-clasping. The flowers, as well as their long thready coronet, are pure white, green externally; they grow singly, with three cordate bracts at their base. This is near *P. Raddiana* of De Candolle, but the flower-stalks are not four times as long as the leaf-stalks.—*Link & Otto.*

TROPÆOLUM DIGITATUM. *Karsten.* A handsome annual (?) climber, from the Caraccas. Flowers bright scarlet. Introduced by M. Decker of Jena.

T. scandens, radice fibrosa, foliis peltatis quinque—septem-lobatis, lobis rotundatis integerrimisque, petalis dentato-ciliatis calycem subæquantibus et aureis, sepalis basi appendiculatis, antheris virescentibus.

The seeds of this Tropæolum were sent by Dr. Karsten during the year 1851 to M. Decker, who sowed them on the 8th of August, directly after their arrival. The fibrous root of this beautiful climbing plant soon sends out a high climbing stem adorned with an elegant and rich foliage. The present species differs from those hitherto known in its unexampled rapidity of growth, and in the peculiar form of its leaves. The leaves are five to seven-lobed, rounded and entire, varying occasionally with respect to the depth of their lobes, of a fresh green colour, which is deepened by the greyness of the under side. From amongst this foliage the numerous yellow

and carmine flowers peep out. The flower itself measures, with the spur, about one and a half inches in length. The calyx and spur are brick-red, inclining to carmine and running into pale green, the former at its base and the latter at its point.—*Maurer, in Allgem. Gartenzeit.*, Dec. 13, 1851.

ADIANTUM RHODOPHYLLUM. *T. Moore.* A new hybrid Fern. Mr. Bause appears to raise new hybrid Adiantums at will, quite as distinct in appearance as many of the species. The present is a beautiful plant, remarkable for the unusual amount of colour in the fronds during the early stages of their development; in this it surpasses any kind we have yet seen. *A. Farleyense*, when grown under the influence of strong light, often comes with the young fronds of a lively shade of reddish-pink, but not so bright as the hybrid. At first the fronds are rosy-purple, then assuming a tint almost like new copper, ultimately changing to green. The plant seems to be a good grower, and as it gets older will most likely attain a medium size.

Fronds smooth, evergreen, nearly or quite a foot long, spreading, with very slender black stipites and rachides, triangular, tripinnate; pinnæ few, the lowermost longest and most developed, pinnate or bipinnate, the upper undivided ones about one and a half inches long, and, as well as the one-inch pinnules, rhombeo-trapezoid, and set on long hair-like pedicels, the margins deeply inciso-lobate, the lobes often toothed; sori rather small for the size of pinnules, occupying the apices of the lobes, but much broken up, so as to be various in form, round reniform oblong or elongate oblong; indusium smooth, narrow. Caudex erect, free from scales; stipites and rachides ebeneous, glossy.—*Gardener's Chronicle*, N.S., vol. xxi., p. 372.

ADIANTUM WEIGANDII. This handsome and distinct-looking Adiantum was exhibited by Messrs. Veitch at one of the Royal Horticultural Society's meetings in the autumn of 1883, where it received the stamp of approval in the shape of a First-Class Certificate. It is of American origin, we understand. In general appearance it comes nearest to *A. decorum*, but is sufficiently distinct from that well-known kind.

Fronds triangular in outline, tripinnate, glabrous; pinnæ stalked, alternate, ovate, the basal one oblong-pyramidate; pinnules stalked, the basal ones distant, ovate from a broad base, with two or three deep narrow sinuses on each side, each separating a rather large cuneate two or three lobed segment, the upper part divided into several similar lobate segments, forming a series of broadly rounded lobes on the margin of the pinnule; upper pinnules crowded; veins free, flabellately forked; sori seated at the base of marginal clefts one to two on the end of each lobe, roundish reniform, often nearly circular; indusium glabrous; stipes elongated, and as well as the rachides and pedicels ebeneous, glossy.—*Gardener's Chronicle*, N.S., vol. xx., p. 748.

BLECHNUM RUGOSUM. *T. Moore.* In this we have a distinct-looking evergreen Fern of small growth and somewhat spreading habit. By those who form collections of Ferns it will be looked on as an acquisition, belonging as it does to a not very numerous genus.

Fronds linear lanceolate, acuminate, about a foot long, the surface rugose, and covered with glandular hairs, pinnate, the pinnæ with a very short stalk like base below where the frond is scarcely narrowed, adnate in the middle parts, and in the upper portion confluent into longish attenuate apex; pinnæ oblong, blunt, or sometimes abruptly acute, falcately curved, the lower ones shorter and slightly deflected, unequal, and cordately rounded at the base, the anterior side subauriculate; sori linear, medial, extending from the base nearly to the apex of the pinna; indusium narrow, entire, glandular, hairy; stipes three to six inches long, brown, with a few rusty ovate and lanceolate acuminate scales near the base, densely clothed above, as is the rachis, with short glandular hairs.—*Gardener's Chronicle*, N.S., vol. xxi., p. 408.

VANDA INSIGNIS, VAR SCHRŒDERIANA. This distinct and beautiful new variety of the well-known *V. insignis* was exhibited by Baron Schrœder at the September (1883) meeting of the Royal Horticultural Society at South Kensington, where it was duly appreciated by the lovers of Orchids, and received a First-Class Certificate. It is quite distinct in colour from the ordinary forms of *V. insignis*, the ground-colour of the petals and sepals being a clear pale yellow, the column and lip white.

THE DUKE OF DEVONSHIRE'S WATER LILY.
(NYMPHÆA DEVONIENSIS.)

[PLATE 99.]

THE DUKE OF DEVONSHIRE'S WATER LILY.

(NYMPHÆA DEVONIENSIS.)

A Very Brilliant HYBRID AQUATIC, *with Crimson Flowers.*

Nymphæa Devoniensis: *Paxton, in Gardener's Chronicle, July* 10, 1852; *Hooker, in Botanical Magazine*, t. 4665.

"HOW is it that aquatic plants are seldom or never brought under the influence of hybridism? They are objects of great beauty, are and always must be much in request, and appear to be just as submissive to man as other plants. Their constitutions may certainly be affected by crossing, quite as much as the Rhododendron. Yet, while the tender crimson species of the Indian Rhododendron are brought to act upon the hardy pale faces of the United States, the delicate white Water Lily of our rivers is left to wild nature in the presence of the most glowing tints possessed by her tropical kindred.

"It may be said that there are physical difficulties in the way of crossing Water Lilies. We grant it. The yellow Nuphars are not likely to breed with the white and blue and crimson Nymphæas, and perhaps Victoria may refuse all alliance with either. But then it is the same everywhere; a Currant will not breed with a Gooseberry, nor an Apple with a Pear. Nevertheless, Gooseberries find kindred blood among Gooseberries, and Currants among Currants: and why may it not also happen to the Nymphæas themselves? This sort of crossing is certainly possible. It has been done.

"Some years since mules were obtained in the Horticultural Garden between the tender blue Nymphæa of the Cape of Good Hope and the hardy white one of England. But owing to neglect they were allowed to perish, and that experiment came to nothing.

"The plant under notice is a mule produced by crossing *Nymphæa rubra* with *N. Lotus.*

"Seeds were obtained in the autumn of 1850, and from them in the following summer Sir Joseph Paxton had the gratification of finding himself in the possession of a most beautiful hybrid, which he named Devoniensis, after the duke, his patron. In leaf and flower it has a great advantage in point of size and robustness of growth over either of its parents; but its most valuable property is its continuing to flower the whole of the season without intermission. The parent plant produced its first flower as early as the 12th of April, 1851, and continued to flower until the middle of October, when it was removed, with a fine succession of flower-buds still upon the plant, to its winter quarters. During this period it often had two expanded flowers and five buds in different stages of development. It produces its flowers quite as freely as *N. dentata;* and its beautiful colour (which is not quite so deep as its parent), together with its large size which has often been as much as eight inches in diameter, together with its fine leaves which have been seldom less than thirteen to seventeen inches across, render it one of the best Nymphæas in cultivation.

"Let us hope that this example will not be thrown away. There can be no difficulty in operating to any extent upon the white Nymphæa, which we should take for the mother of the brood that it is hoped will come."

The plant thus referred to in the *Gardener's Chronicle* is now represented from a specimen received from Chatsworth, and it will be admitted that it deserves all that was said of it. It has also been published in the *Botanical Magazine* by Sir W. Hooker, who states that for the opportunity of figuring this truly splendid plant he is indebted "to Mrs. Spode, the lady of Joshua Spode, Esq., Armitage Park, Rugely, Staffordshire, whose gardens and rare exotics are celebrated in the neighbourhood, and are likely to be still more so from the taste and skill displayed by their generous proprietors, and by the zeal and energy of their intelligent head gardener." Sir William adds that the living plant at Kew, from Mrs. Spode, as well as cut specimens received from Armitage, and others sent by Mr. Davison from Sir W. Molesworth's tropical aquarium at Pencarrow, Cornwall, amply justify all that is said in the *Gardener's Chronicle.*

Mr. Davison observes, that with him *Devoniensis* grows and flowers most freely, planted in rough turf taken from a pasture and laid in a heap one year previous to its being used, with one-sixth of dried cow-dung. The water in the tank in which it grows is kept from 75° to 80°.

We should add that Sir W. Hooker raises the question of whether *N. dentata* may not have been one of the parents of *N. Devoniensis*, rather than *N. Lotus*. He remarks that *N. Lotus* and *N. dentata* are very closely allied species, if they be really and truly distinct. He thinks that the pale and depressed base of the calyx of *N. dentata*, giving that part a somewhat conical form, furnishes what may perhaps prove a distinguishing mark, and that character he finds in *N. Devoniensis*. Mr. Davison, at Pencarrow Gardens, also speaks of the *N. Devoniensis* as "a hybrid between *N. rubra* and *N. dentata*."

THE RACEMOSE SOLENID.
(SOLENIDIUM RACEMOSUM.)

[PLATE 100.]

THE RACEMOSE SOLENID.

(SOLENIDIUM RACEMOSUM.)

A Hothouse Epiphyte, from NEW GRANADA, *belonging to the Order of* ORCHIDS.

Generic and Specific Character.

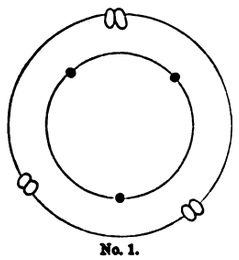
SOLENIDIUM. Sepals equal, spreading flat, distinct. Petals of the same form. Lip unguiculate, bent downwards, with two elevated feathery plates which are free at the point, and have a keel between them at the base. Column straight, bordered with a membrane, one-toothed at the end on each side, with an elevated fleshy anther-bed; near the base on each side below the termination of the membranous border is a gland. Pollen-masses two, waxy, excavated behind; caudicle linear; gland small and roundish. An epiphyte from tropical America, bearing pseudobulbs, and having the habit of Oncidium.

THE RACEMOSE SOLENID. Leaves two, narrowly strap-shaped, shorter than the racemose scape. Flower-stalks straggling. Lip linear, dilated and rounded at the point.

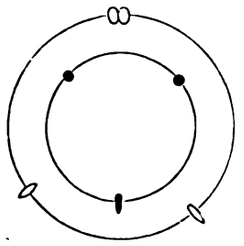
Solenidium racemosum: *Lindley, in Orchidaceæ Lindenianæ*, No. 79.

AN epiphyte from the forests of New Granada, near Pamplona, whence it was introduced by Mr. Linden, who states that it grows at the height of 8,500 feet, flowering in November. For a fresh specimen we are indebted to Robert Hanbury, Esq., of Poles, with whom alone we believe that it has flowered.

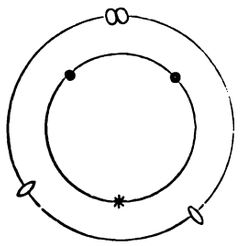
The plant has much the appearance of an Oncidium, in its manner of growth, foliage, and flowers, but it is materially different in structure. The original definition of the genus, framed upon an examination of shrivelled and crushed flowers, is in some respects erroneous, and is now set right. The lip is not furnished near the end with two teeth; that appearance was produced by the two feathery plates which occupy the lip (fig. *b*) having been pressed into a mass inseparable from the lip itself; and the incumbent position of the pollen-masses with respect to their caudicle arose from the same cause and is not natural in the plant.



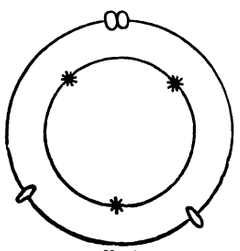
No. 1.



No. 2.



No. 3.



No. 4.

The main differences between Solenidium and Oncidium consist in this; that the column is earless and has a thin membranous border, terminating upwards in a thin triangular tooth, and rounded off above the base; beneath the lower end of the column stands a pair of distinct but minute glands, which must be analogous to the column ears of Oncidium, if there is any analogy between them. The crest of the lip, which in Oncidium is composed of three or some other uneven number of tubercles, is here replaced by a pair of long feathery plates which stand considerably above the lip itself, and being free at the end look in profile like a pair of shaggy ears. All this is very unsuccessfully represented on our plate at A. Variable as is the crest of the lip of Oncids it presents no structure approaching this, not even in the pulvinate division. The feathery plates are more like the raised lines of Cymbidium or Brassia, but the column and its peculiar basal glands resemble neither the one nor the other.

The feathery processes upon the lip, and the glands on the column, of Solenidium will be regarded as staminodes (abortive stamina), belonging—the first to the same series as the perfect stamen, and the last to a supposed inner series of undeveloped stamens, provided the theory referred to in *Folia Orchidacea* under Zygostates should be accepted by botanists. According to this theory the staminal apparatus of an Orchidaceous plant consists of two rings or whorls, each composed of three stamens more or less developed. In general the central of the outer whorl is alone perfect; while in Cypripedium perfection is confined to the two lateral inner stamens. The rest of the stamens are either wholly suppressed, as in many Dendrobes, or appear in the form of ears to the column or crests upon the lip; the ears of the column sometimes representing the lateral inner staminodes, and the crests of the lip being made up either of two lateral outer and one central inner staminode, or of either. Such evidence as exists upon this subject appears favourable to the opinion; which would be conclusively established if the crests of the lip were detected bearing pollen, a circumstance that has not yet been observed.

Upon this theory, the accompanying diagrams will represent the condition of the staminal apparatus in the different modifications which this Order produces. (In all cases but one, No. 5, the exterior

ring represents the series to which the perfect stamen belongs, and the inner ring the series which is usually more or less disguised. For the convenience of description the perfect stamen and accompanying abortions may be called the *outer stamen and staminodes*, while those of the second and more paradoxical series may be termed the *inner stamen and staminodes*. The asterisks indicate an entire suppression of staminodes.)

No. 1 shows the theoretical state of the flower, with the three outer stamens complete, and three inner staminodes. The outer stamens are here in the condition in which they appear in the plant figured by Dr. Wight under the name of Euproboscis, and by Griffith in Falconer's Dendrobium normale.

No. 2 represents such genera as Odontoglossum in which one outer stamen is perfect, the two outer staminodes in the form of the lateral plates of the crest of the disk; then of the inner staminodes two form the wings of the column, and the other the midrib which separates or is blended with the lateral plates of the disk.

No. 3 represents such a structure as that of Anacamptis, where the usual outer stamen is attended by two of the inner staminodes, while two outer staminodes appear as plates on the lip, and the central of the inner staminodes is missing. Solenidium would also belong to this form.

No. 4 is the case of Cymbidium properly so called, in which all the inner staminodes are deficient, and the lateral outer staminodes lie upon the lip in the form of two raised lines.

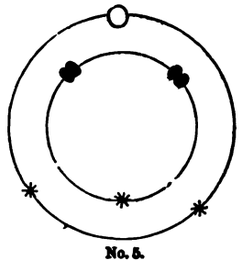
No. 5 shows the beginning of the series in which outer lateral staminodes are wanting, except one which represents the perfect stamen in the preceding cases, while on the other hand the two lateral inner stamens are perfect and the third wanting; this occurs in Cypripedium.

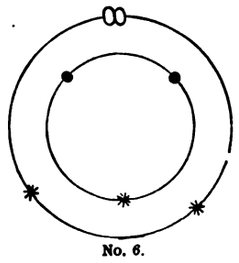
No. 6. In Orchis the structure is absolutely reduced to one perfect outer stamen and a pair of inner lateral staminodes, occurring as tubercles at the base of the column; all the other staminal apparatus being missing. Thelymitra comes here.

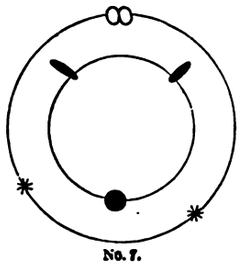
No. 7 shows what happens in Zygostates in which the outer lateral staminodes are absent, but the whole of the inner ones are fully and largely developed. The structure of Pterostylis enters into the same category, although in some respects very different.

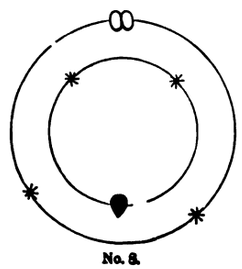
No. 8 may be regarded as the expression of Maxillaria, with all the staminal apparatus gone except the usual outer stamen and the corresponding inner staminode in the form of a tumour on the lip.

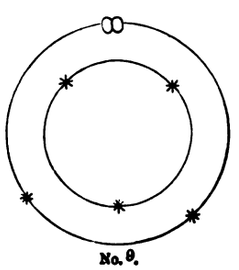
No. 9, with every part wanting except the outer central stamen, shows what the structure is of many Dendrobes, and Sarcopods.


No. 5.


No. 6.


No. 7.


No. 8.


No. 9.

But although these differences exist, and notwithstanding their seeming importance, we own our inability to discover their true value. It does not appear that they can even be employed for the limitation of genera; for *Odontoglossum læve* can hardly be said to possess a trace of the great staminodes of both series which are generally characteristic of genera. This question is, however, only now opened, and it may happen that further observations from this point of view may show a means of employing staminodial distinctions at present unsuspected.

GLEANINGS AND ORIGINAL MEMORANDA.

TULIPA GRISEBACHIANA. A new species of Tulip, from Gliva, in the Herzegovina, that flowered at Kew in the spring of 1884. Like many other species of this fine genus, it is unfortunately little known.

Bulb middle-sized, ovoid; stem a foot long, one-flowered, lacte, very glaucous; leaves three, placed near together below the middle of the stem, lorate, very glaucous, erect, deeply channelled down the face, quite glabrous, six to seven inches long, the outer three-quarters of an inch broad, the inner one-third of an inch. Flower faintly scented, erect, oblong-infundibuliform, an almost uniform pale lemon-yellow, under two inches long. Peduncle erect, overtopping the leaves; perianth segments all acute, the outer oblong-lanceolate, half an inch broad at the middle, only faintly tinged with green, especially towards the pubescent tip and base; inner twice as broad, ovate-spathulate, bright lemon-yellow with a slender green keel. Stamens bright yellow, half an inch long; filaments hairy at the base; ovary cylindrical-triquetrous; stigmas minute.—*Gardener's Chronicle*, N.S., vol. xxi., p. 542.

NEPENTHES CINCTA. *Masters.* This Nepenthes appears to have been raised by Messrs. Veitch from seeds collected in Borneo; but whether it is a true species or a natural hybrid seems uncertain. As a matter of course from the cultivator's point of view this is of no consequence, as it is unquestionably a fine kind with large well-marked pitchers, as will be understood from the following description by Dr. Masters.

Plant glabrous, or nearly so. Stems cylindrical, stout; leaves approximate, as in *N. Northiana*, twelve by three inches, coriaceous, oblong-lanceolate, tapering to a broad dilated base, dark green, midrib somewhat angular on the lower surface. The base of the leaf is intermediate between the sessile leaf of *N. Northiana*, and the long tapering stalk of *N. albo-maryinata*. The venation is obscure, but there are two ribs on either side of the midrib parallel with the margin. The tubular, slightly ventricose, rounded at the base, pitchers measure seven to eight by two and a half inches; their colour is green flushed with red, and with numerous irregular purple blotches; the rim is very oblique, a quarter of an inch broad, undulate, lobed, not entire as in *N. albo-marginata*, and finely ribbed with a narrow whitish band around the top of the tube. The lower half of the pitcher is thicker in texture than the upper, the wings deep, extending nearly to the base of the pitcher, and fringed with long sharp teeth; the lid arches over the mouth of the pitcher—it is suborbicular and two-ribbed. The back of the pitcher is marked by a prominent purplish rib. At first sight it resembles *N. Boschiana*, but has glabrous leaves.—*Gardener's Chronicle*, N.S., vol. xxi., p. 576.

PHRYNIUM SANGUINEUM. *Hooker* (*alias* Maranta sanguinea, *Hortul*). A handsome stove herbaceous plant, with white flowers and crimson bracts. Blossoms in the spring. Native of — (?). Introduced by Mr. Jackson, of the Kingston Nursery.

Received from the continent, under the name of *Maranta sanguinea*; but of what author, or where, if anywhere, it is published or described, I have not been able to ascertain. It is assuredly rather a *Phrynium* than a *Maranta*, and not very distantly removed from our *Phrynium capitatum*, figured in the *Botanical Magazine*. That species, however, differs in the colour of the flowers and the leaves, in the inflorescence, and materially in the shape of the blossoms. The plant is handsome in its flowerless state, from the rich blood-colour of the long sheaths of the petioles, and the deep purple of the under side of the leaves; but the inflorescence adds greatly to the beauty, the upper part of the long peduncle, the copious bracts, and the flowers and pedicels and rachis being alike of a rather bright red colour. It blossoms copiously in the winter and spring months. Stemless or caulescent. Leaves ten inches to a foot long, oblong, acuminate, penninerved; nerves oblique, dark full green above, rich purple below, on short petioles, which are jointed upon the long base, of which the inside forms a projecting membranous sheath to the scapes. Scape elongated, a foot to a foot and a half long, erect, terete, red upwards, terminated by a compound raceme, or rather compact panicle, of bracteated flowers. Bracteas all red, primary ones (at the base of the main ramifications) large, ovate, acute, conduplicate; lesser ones, or bracteoles, of the same form and colour. Rachis short, and pedicels

articulated, red. Flowers red. Ovary small, turbinate, longitudinally furrowed. The outer sepals broad, ovate, obtuse, nearly equal, free to the base, erect. Inner sepals erect, very unequal, one of them deeply two-lobed, combined for a good part of their length from below among themselves, and with the broad and flat petaloid filament and style. Anther solitary, lateral. Style curved. Stigma grooved.—*Botanical Magazine*, t. 4646.

BESCHORNERIA YUCCOIDES. A very fine half-hardy perennial from Mexico. Flowers green, among deep red bracts. Belongs to Amaryllids.

B. Yuccoides; foliis radicalibus crassis rigidis lato-lanceolatis acuminatis suprà lævissimis subtus tactu scabris margine minutissimè cartilagineo-serrulatis, scapo racemoso subpaniculato, bracteis amplis coloratis maculatis, floribus glabris tripolli caribus pedunculatis fasciculatis.

The original species of this genus, *Beschorneria tubiflora*, has no distinct stem, but produces its erect scape from the midst of a tuft of linear radical leaves, which taper into a long fine point, and are rough at the edges with very minute toothings; they are from fifteen to eighteen inches long, by from four to six lines wide, stiff and dark green. This we learn from Kunth. In the species now published, the leaves are broad and thick, like those of *Yucca aloifolia*. The scape rises gracefully to the height of six or seven feet, with a few lateral branches; it is smooth, blood-red, obtusely angular, and clothed at every internode with large membranous ovate crimson bracts. The flowers grow in fascicles of from two to four each, on pedicels from half an inch to an inch long, from which they very readily disarticulate; when full-grown they are two and a half inches long above the articulation. The ovary is clavate, acutely triangular, three-celled, with numerous horizontal ovules in a double line. The sepals and petals are green, distinct, but formed into a tube, and nearly alike in form and texture, narrowly oblong, channelled, obtuse, with a thick rib at the back; the former are more channelled and narrower than the latter; both are yellow at the point, and become ruddy at the back; honey is secreted in abundance from near the base, when the flowers are open; but they never spread much at the end. The stamens are six, equal, inserted into the base of the sepals and petals; the filaments are quite straight, and awl-shaped at first; after a time they acquire a sigmoid form near the base in consequence of not being able to extricate themselves from the flower as they lengthen. The anthers are versatile, linear, two-celled, arrow-headed at the base, and contain a pale greenish pollen; the pollen-grains usually adhere in fours, or a smaller number, are smooth, spherical, and have a distinctly pitted surface; placed in water they quickly burst their outer shell, when the inner sac will escape in the form of a free transparent globe. The style is continuous with the free triangular apex of the ovary, is slender, three-cornered, and terminates in a papillose three-lobed stigma, from which drops of honey exude some time before the flower expands.

The scape of this plant contains a great quantity of singularly tough woody tubes and spiral vessels, lying in the midst of very firm colourless transparent cells. The sides of the cells, *and of the woody tubes also*, are very conspicuously marked with short oblong bars or roundish specks upon the inside of their walls. In the presence of iodine the tissue becomes pale yellow, but the bars and specks undergo no change; they are, therefore, not protoplasm; are they deposits of siliceous matter?

The three genera, Agave, Furcræa, and Beschorneria, are nearly related but satisfactorily distinguished. In Agave the filaments are folded down before expansion; in the other two they are straight. Then Furcræa has short filaments, with a great dilated base; while in Beschorneria the stamens are long, and taper gradually from base to apex.

The plant before us flowered in the garden of the Honourable W. F. Strangways.

ILEX LEPTACANTHA. A handsome, hardy, evergreen shrub, from the North of China. Introduced by Mr. Fortune.

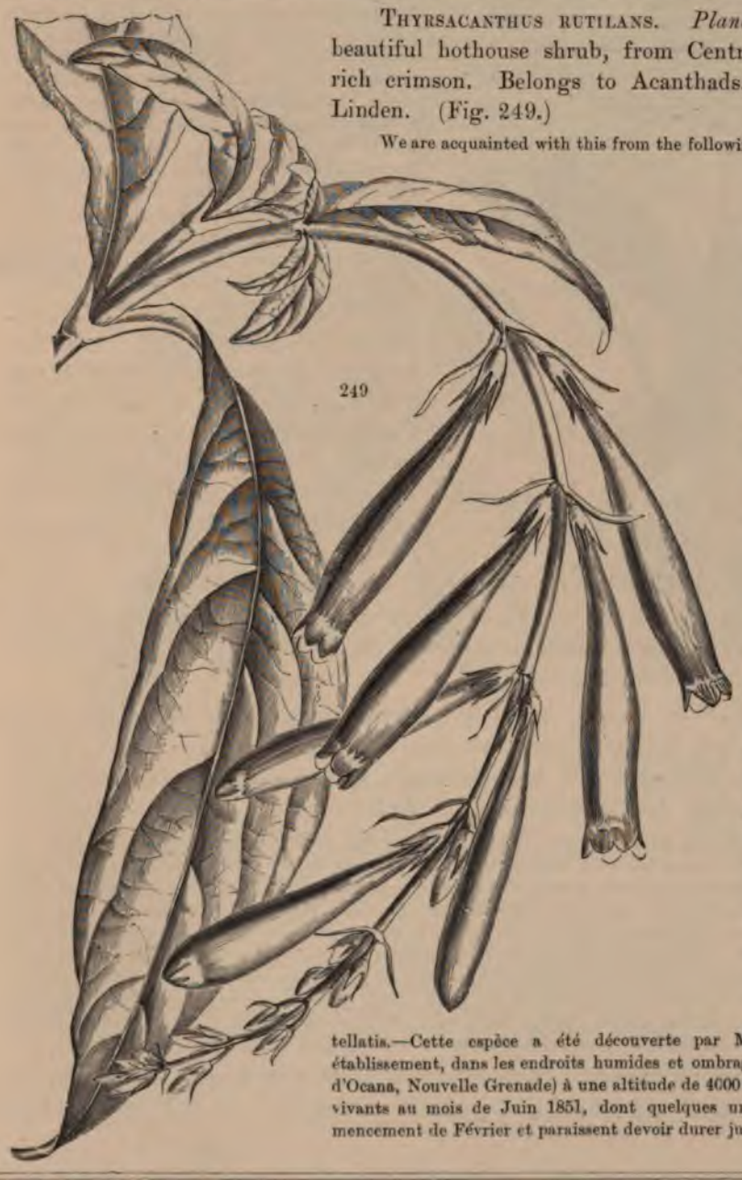
I. leptacantha; foliis ovali-oblongis acuminatis breviter petiolatis æqualiter spinoso-dentatis dentibus gracilibus.

That this plant is an Ilex seems to be proved, in the absence of flowers and fruit, by its being readily grafted upon the common Holly. It has very handsome foliage; the leaves being six inches long by two inches wide, of a very uniform oval figure, bordered regularly with distant slender spiny teeth. It is a good deal like the Nepal *I. dipyrena*, but that plant seems to have much more coriaceous leaves; in this plant they are of about the texture of a Portugal Laurel.

MEDINILLA SIEBOLDIANA. *Planchon.* A beautiful stove shrub, with rose-coloured flowers. Belongs to Melastomads. Native of the Eastern Archipelago. Introduced by M. Van Houtte.

A native, it is said, of the Moluccas, whence it appears to have been introduced to the Belgian gardens by M. Van Houtte, and through that channel to our stoves in England. It forms a handsome shrub, with large dark green leaves, and drooping racemes, of waxy rose-coloured flowers, having dark purple anthers. Our increased intercourse with the Malay Archipelago has been the means of adding considerably to our knowledge of the species of this fine genus. Twenty-four species are enumerated in Walper's *Repertorium*, and eleven additional ones are given in the *Annales* of the same author—thirty-five in all. Most of them are described in Blume's *Mus. Bot. Lugd. Bat.*, a work of great value to the student of the botany of the Dutch possessions in the Malay Islands. With us this species flowers in the spring, and continues long in blossom. Our plant is between three and four feet high, shrubby, with the stem and opposite branches quite terete; the branchlets only are here and there seen to have an indistinct angle. At the nodes of the stem

and branches, between the petioles of the leaves, is a dense tuft of soft spicules of a dirty brown colour. Leaves, on short thick petioles, four to five or six inches long, coriaceous, glabrous, between ovate and elliptical, quite entire, acute at the base, shortly and suddenly acuminate at the apex, strongly five-nerved ; nerves very prominent beneath, where the colour is pale green, while it is dark green above. Peduncle terete, as long as the finger, and, together with the thyrsoid panicle of flowers, drooping. Pedicels about as long as the calyx, which latter has the tube nearly globose, fleshy, pale rose ; the very short margin or limb erect and erose. Petals four, spreading, broad, ovate, acute, rose-coloured. Stamens eight, pointing and spreading to one side ; filaments subulate, white, curved ; anthers also subulate, deep purple, wrinkled on the upper side : at the base above formed into two incurved lobes, below furnished with a straight spur. Ovary combined with the calyx ; style curved, subulate ; stigma obtuse.—*Botanical Magazine*, t. 4650.



249

THYRSACANTHUS RUTILANS. *Planchon and Linden.* A beautiful hothouse shrub, from Central America. Flowers rich crimson. Belongs to Acanthads. Introduced by Mr. Linden. (Fig. 249.)

We are acquainted with this from the following note, and a coloured figure circulated by Mr. Linden, of which the annexed woodcut is a copy. It has a purple round stem ; rich deep green rather undulated leaves, and drooping racemes of brilliant crimson tubular blossoms about two inches long. It seems well worth the attention of those who care for hothouse plants.

"Thyrsacanthus rutilans *Planch. & Lind.* ; T. (sectionis primæ *Nees*) ; foliis subsessilibus oblongo-lanceolatis acuminatis acutis basi angustatis margine obsolete eroso-denticulatis, supra saturate-viridibus, subtus pallidis utrinque sparsim pilosulis, racemis, axillaribus laxè plurifloris nutantibus ; bracteis parvis inferioribus lineari-lanceolatis superioribus subulatis, floribus ad axillas bracteârum solitariis pedicellatis (pedicellis 3—4 lin. longis) calycis 5-partiti sicut rachidis crispulo-pilosuli, laciniis subæqualibus subulatis pedicellum æquantibus, corollæ tubuloso-ventricosæ subregularis coccineæ inferne sensim attenuatæ aut contractæ limbo 5-lobo. lobis subæqualibus erosis, staminibus inclusis glaberrimis sterilibus 2 brevibus capitellatis.—Cette espèce a été découverte par M. Schlim, voyageur de mon établissement, dans les endroits humides et ombragés près de Sa Cruz (province d'Ocana, Nouvelle Grenade) à une altitude de 4000 pieds. J'en ai reçu des pieds vivants au mois de Juin 1851, dont quelques uns fleurissent depuis le commencement de Février et paraissent devoir durer jusqu'en Juin."

MASDEVALLIA WAGENERIANA. *Linden.* A curious little Orchidaceous epiphyte, from Central America. Flowers small, dull pale red. Introduced by Mr. Linden. (Fig. 250.)

M. Wageneriana; uniflora, folio obovato-oblongo rotundato in petiolum angustato, scapo foliis æquali angulato sepalis ovatis erectis æqualibus in setam longam extensis, petalis truncatis subcarnosis obtusè tridentatis margine anteriore in plicam producto, labello rhombeo serrulato apice calloso inflexo.

Masdevallias are among the most curious plants of their order, and sometimes among the handsomest. One of them, *M. coccinea*, which was sold at one of Mr. Stevens's sales, has large flowers as scarlet as a soldier's jacket. Many, however, among which this stands, are as insignificant in appearance as they are singular in structure. Here the three sepals join into a cup, and each extends into a long flexible bristle; within the cup thus formed lie the smallest of organs of fructification, consisting of two minute truncated petals, whose fleshy front edge is folded into a kind of elbow, and whose lip is a thin lozenge-shaped serrulate plate, the end of which is callous and hooked inwards. We are indebted to Mr. Linden for our knowledge of the plant, a living specimen having been received from him. Like the rest of the genus, it is a little alpine thing, requiring the treatment of a Stelis.


250

CATTLEYA TRIANÆ, VAR. LEEANA. This is a magnificent form of the fine winter and spring flowering species Trianæ, one of the most sportive of Cattleyas, as well as one of the most justly favourite kinds. It was shown by its fortunate owner, Mr. Lee, of Downside, at the March (1884) meeting of the Royal Horticultural Society, where it was awarded a First-Class Certificate. It is a large full-sized flower, with a beautiful combination in the colours; the lip is very broad, and remarkable for the bright magenta colour which covers a considerable portion of its surface. It is one of the finest of the many fine forms of this Cattleya existent.

DOODIA HARRYANA. *T. Moore.* A pretty evergreen species that will thrive under greenhouse treatment, and on that account, to many who cultivate Ferns, more valuable than the kinds which require more heat to grow them. It is a dimorphous species, which renders it more interesting. It is supposed to be of garden origin.

Fronds dwarfish, pinnate, dimorphous; sterile ones shorter, spreading, membranaceous, linear-oblong acute, the pinnæ oblong, blunt, the lower ones distinctly stalked, with a blunt auricle on the anterior, and sometimes on the posterior base, so as to become sub-hastate, serrate, the veins once or twice forked, free, with club-shaped apices terminating opposite the serratures just within the narrowly marginate edge. Fertile fronds taller (about ten inches), erect, lanceolate, with an attenuated apex, stouter and firmer in texture than the sterile, the pinnæ distant, the middle ones one to one and a quarter inch long, narrow linear, obtuse, serrate, with the base auriculate, especially on the anterior side, the auricle sometimes separated into a lobe, the upper ones adnately decurrent, the sori also running down the sides of the rachis; sori occupying the whole length of the pinnæ and of the attenuated apex; indusium narrow, arcuate, becoming reflexed; caudex short, erect; stipes short, purplish at the base, and, as well as the rachides, slender, and bearing a few scattered hair-scales.—*Gardener's Chronicle*, N.S., vol. xxi., p. 408.

CYPRIPEDIUM PORPHYROCHLAMYS. In this we have another of Messrs. Veitch's hybrid Orchids, which threaten to outnumber the species in cultivation. It is a cross between

C. hirsutissimum and *C. barbatum biflorum*. The following is Professor Reichenbach's description.

Leaf linear ligulate, very acute. Upper sepal transverse, blunt, elliptical, very shining as petals, with much projecting nerves, reddish purple with white borders. The lateral sepals are a triangular greenish body, not equal in length to the lip. Petals descending, broad, ligulate, blunt acute, with some small undulations at the base outside and inside, yellowish at the base with innumerable small freckles of purest mauve-purple (far superior to that of the upper sepal) on exterior half. Lip of *C. barbatum*, but colour better. Staminode nearly of *C. barbatum*.—*Gardener's Chronicle*, N.S., vol. xxi., p. 476.

251

LONICERA FRAGRANTISSIMA. A sub-evergreen hardy shrub. Flowers whitish, very sweet-scented. Native of China. Belongs to Caprifoils. Introduced by the Horticultural Society. (Fig. 251.)

L. fragrantissima (CHAMÆCERASUS); glaberrima, foliis sempervirentibus oblongis acutis subtus pallidis, pedunculo nutante petiolo longiore, bracteis herbaceis lineari-lanceolatis ovario longioribus.

This is one of the plants obtained from China by Mr. Fortune, while in the service of the Horticultural Society. It blossomed in the garden of the Marquis of Salisbury, at Hatfield, whence Mr. William Ingram, the gardener there, sent us specimens, with the following note:—

"The plant which affords me these flowers has been in bloom since January. It occupies an east wall, and has enjoyed no particular advantages of soil or treatment. The flowers appear with the earliest development of the leaves; and although not large, or otherwise striking in appearance, compensate for any deficiency by their exceeding fragrance, combining the richness of the perfume of orange blossom with the delicious sweetness of the honeysuckle."

Its evergreen foliage distinguishes it from all the previously known species of the Chamæcerasus division of the genus.

252

ACACIA MARGINATA. *R. Brown* (*alias* A. trigona, *Alph. De*

Candolle). A handsome greenhouse shrub, with dark green leaves, and bright yellow blossoms appearing in April. Native of King George's Sound. (Fig 252.)

This is known in gardens as *A. celastrifolia major*, under which name the plant from which our drawing was made was exhibited by Messrs. Henderson and Co., of Pine Apple Place. Its long narrow curved phyllodes (leaves), shorter spikes, and downy ovary, amply distinguish it from that species. To *A. myrtifolia* it approaches much more nearly, as Mr. Bentham has remarked; it seems indeed to be distinguishable only by its longer and more falcate leaves and more downy ovary. As to the *A. marginata* of gardens, we believe it is more frequently *A. celastrifolia* itself than anything else.

GASTROLOBIUM VELUTINUM. A handsome Swan River greenhouse shrub, of the Leguminous Order. Flowers rich orange. Introduced by Messrs. I. and A. Henderson. (Fig. 253.)

This very pretty shrub was exhibited at a meeting of the Horticultural Society, by Messrs. Henderson, of Pine Apple Place, as a plant raised from Swan River seeds received from Mr. Drummond. It has in flower something the aspect of *Chorizema Henchmanni*, on account of its peculiarly rich orange-coloured flowers; but it is in reality nearer *Gastrolobium bilobum* than anything else. Its very small leaves and soft velvety surface are striking peculiarities.

DICHOPOGON STRICTUS. This is an herbaceous plant from South-Eastern Australia. It has long grassy leaves, and bears nearly erect spikes of dark purple flowers that have an agreeable perfume; the leaves are elegantly recurved, the flowers rising well above them. The plant will most likely require the protection of a greenhouse.

Root-stock stout. Leaves in the largest forms a foot and a half long by half an inch broad, concave, bright green. Stem longer than the leaves, erect, stout or slender. Raceme or panicle three to eight inches long; pedicels in the largest forms one and a half inch long, very slender. Perianth one and a half inches in diameter or less, sometimes only a quarter of an inch, pale or dark purple. Segments horizontally spread, outer elliptic oblong, acute concave; inner rather longer, twice as broad, orbicular or oblong and obcordate, three-nerved down the centre, margins erose. Stamens half the length of the perianth, suberect; filaments very short, glabrous; anthers linear, dark purple; appendages oblong, granular. Ovary globose, glabrous; style filiform; stigma simple. Capsule globose, on an erect or spreading pedicel. Seeds compressed, testa black.—*Botanical Magazine*, 6746.

PENTAPERA SICULA. *Klotzsch* (*alias* Erica sicula, *Gussone*). A half-hardy evergreen shrub, with globular pale pink flowers. Native of Sicily. Belongs to Heathworts. (Fig. 254.)

This little-known plant has linear terete leaves growing in fours, globular or ovate-oblong and downy flowers, having a great spreading membranous calyx, and growing in umbel-like clusters on long slender stalks. According to Gussone the shrub grows in Sicily, on the calcareous rocks of the mountains that overlook the sea, especially on M. Cofani near Trapani. Its flowers are as large as those of an Arbutus.

28 MANY-SPIKED BILLBERGIA
(BILLBERGIA POLYSTACHIA)

[PLATE 101.]

THE MANY-SPIKED BILLBERGIA.

(BILLBERGIA (?) POLYSTACHYA.)

A Handsome Evergreen Hothouse Perennial, belonging to BROMELIADS, *from* BRAZIL.

Specific Character.

THE MANY-SPIKED BILLBERGIA.—Leaves channelled, with spiny teeth, curved back at the point, inflated at the base, shorter than the scape. Spike conical, many-ranked, mealy. Bracts roundish, acuminate, closely imbricated.

OF this beautiful plant a specimen in flower was exhibited by M. de Jonghe, of Brussels, at one of the meetings in the garden of the Horticultural Society, as a new species of Billbergia. Having been afterwards removed we had no opportunity of describing it, and are only now able to make it known by means of a coloured drawing which accompanied the specimen.

It is no doubt a Brazilian plant, and seems nearly related to Lemaire's *Billbergia rhodocyanea*, another charming species, figured in the *Flore des Serres*, vol. iii., p. 207, with long loose stiff spiny-toothed crimson bracts, bright blue corollas, and broad blunt dark green leaves banded with white. That plant flowered with Mr. Van Houtte.

THE GOLDEN-FLOWERED DIELYTRA.
(DIELYTRA CHRYSANTHA.)

[PLATE 102.]

THE GOLDEN-FLOWERED DIELYTRA.

(DIELYTRA CHRYSANTHA.)

A Handsome Hardy Herbaceous Plant, from CALIFORNIA, *belonging to the Order of* FUMEWORTS.

THE GOLDEN-FLOWERED DIELYTRA.—Stem tall, leafy, branching. Leaves twice or thrice pinnate, with linear acute smooth segments. Panicle long. Bracts and calyxes broad-ovate, blunt. Petals spathulate, the outer scarcely gibbous at the base; the inner with a broad wing along almost the whole length of the back. Stigma very broad, truncate.

Dielytra chrysantha: *Hooker and Arnott, Botany of Beechey's Voyage*, p. 320, t. 73.

THIS very handsome hardy perennial was originally discovered in California by Douglas, from whose specimens it was published in the work above quoted. More recently it has been found in the same country by Mr. W. Lobb, from whose seeds Messrs. Veitch succeeded in raising it. It flowered in the Exeter Nursery for the first time.

It forms a handsome tuft of firm very glaucous foliage, sometimes much more finely cut than in our figure, and in general texture and colour resembling Garden Rue. Among the leaves rise stiff branching panicles of rich golden-yellow blossoms.

Although very inferior to *Dielytra spectabilis*, this has a beauty of its own, which will

render it a favourite for decoration. The contrast between the gray dull leaves and gay glittering flowers is particularly agreeable.

We are not aware that this demands any particular care. Like other Californian plants it likes a roasting summer, and therefore should have the warmest and driest berth which the garden can afford.

GLEANINGS AND ORIGINAL MEMORANDA.

CHIONANTHUS RETUSUS. A hardy deciduous shrub, with white sweet-scented flowers. Native of China. Belongs to Oliveworts. Introduced by Mr. Fortune. (Fig. 255.)

C. retusus; foliis longe petiolatis obovatis retusis membranaceis subtus pubescentibus, paniculis terminalibus subverticillatis nudis, corollæ tubo sepalis subulatis longiore lobis lineari-spathulatis.

Messrs. Standish and Noble, of Bagshot, furnished us with flowering specimens of this very pretty sweet-scented bush, obtained for them by Mr. Fortune. When out of leaf it looks like some slender kind of Ash. The leaves

255

are slightly downy on the under side, very long-stalked, obovate, membranous, with the upper end notched out or truncate, while the lower tapers into the stalk. The flowers are pure white, in slender, terminal, somewhat whorled panicles, shorter (in the specimens before us) than the flowers. The corolla has a very distinct tube, rather longer than the subulate sepals, and is from four to five lobed, with the divisions linear, long, and broader at the end than at the

base. There are two stamens, concealed within the tube of the corolla, with stiff, short, erect filaments, and fleshy anthers. The ovary is ovate, two-celled, with a pair of ovules in each cell. The stigma is bluntly two lobed and sessile. We find no tendency to the separation of the petals into two parcels; on the contrary, they form a true monopetalous corolla; but they are easily torn asunder without laceration. Mr. Fortune favoured us with the following memorandum concerning this plant:—

"A dwarf shrub, obtained in a garden near Foo-chow-foo, on the river Min. Its Chinese name is *Ting-heang*. It is deciduous in winter, and produces its snowy white flowers probably in spring. The flowers are singularly fragrant, and on this account it is much prized by the natives in Fokien. Although discovered in Foo-chow, I suspect it has been brought there from a more northern latitude. I took some plants north to Shanghae, for Mr. Beale's garden, and I observed they did not suffer in the least from a very severe winter to which they were exposed soon after they arrived. It is just possible this plant may have been brought from the Loo-choo Islands, or Japan, in the trading junks which visit Foo-chow every year. The Chinese propagate it by grafting on *Olea fragrans*. It will be better, however, to choose some other stock for it in this country, as it may probably be found a hardy plant in our climate."

PODOCARPUS NERIIFOLIA. *Don.* A greenhouse evergreen shrub, native of Nepal. Belongs to Conifers. Fruit fleshy, orange-red. Introduced by Dr. Wallich.

With us this forms a good-sized greenhouse shrub or small tree, with very copious dense evergreen foliage, and in a state of fruit really handsome from the copious purple-red fleshy receptacles of the seed, which are produced in the winter months. It appears to be a mountain plant, and it is not impossible but it may prove hardy enough to bear the open air, against a wall. It is with us treated like the Australian and New Zealand plants. The female flowers appear very apt to coalesce, and the receptacles then to bear two berries; and even when there is one, the receptacle seems to be often unnaturally enlarged, and to be much deformed. The male amenta are described from Dr. Wallich's dried specimens in our herbarium. The female fructification is produced in the winter months. The fleshy receptacles are said to be eaten by the Nepalese. Our plants are from six to seven feet high, much branched, the branches copiously furrowed from the decurrent petioles. Leaves scattered, approximate, sometimes appearing verticillate, in whorls of three to five, narrow, lanceolate, acute, coriaceous, the margins slightly revolute, dark green above, pale and slightly glaucous beneath, below tapering into a very short decurrent petiole. Male amenta axillary, sessile, solitary, cylindrical, slender, an inch or more long, arising from a cup-shaped scaly involucre. Anthers numerous, imbricated, two-celled, much acuminated, at length reflexed. Peduncle of the female solitary, axillary, single-flowered, about half an inch long. Receptacle of the fruit oblong, fleshy, soon enlarging, especially in breadth, with an oblong depression at the top, and variously lobed on each side, from pale yellow-green becoming orange-red, at length deep purple, slightly glaucous, bearing a small subulate recurved bractea at the base. At the apex it bears an obovate glaucous-green seed. Sometimes two or more receptacles grow from the same peduncle, and such a one we have seen to be proliferous at the extremity. —*Bot. Mag.*, t. 4655.

OXALIS ARTICULATA. A summer flowering greenhouse plant from South Brazil, with pale lilac flowers produced freely in succession; the flowers are smaller than those of *O. Boweana*, to which species it is somewhat similar in character. The greenhouse section of Oxalis is easily managed, thriving in ordinary loam with a moderate supply of water while growing, and kept drier during the winter.

Rootstock two to three inches high. Leaves three-foliolate; leaflets three-quarters to one inch long, broadly obcordate, bright green with red margins; petiole very slender, three to four inches long. Scape very slender, longer than the petioles, many flowered; bracts very small; pedicels slender, one to two inches long, and, as well as the calyx, more or less glandular pubescent. Sepals one-fourth of an inch long, linear-oblong, acute, with a red callus on the back beneath the tip. Corolla pale lilac, one inch in diameter or less; petals obovate-spathulate, very broad at the rounded tip, spreading and recurved. Staminal tube glabrous, filaments pubescent, the shorter ones not half the length of the styles, the longer four times as long; anthers small, didymous. Ovary elongate, pubescent; styles short, suberect, subulate, pubescent, shorter than the cells, stigmas capitate.—*Botanical Magazine*, 6748.

ACACIA CYCNORUM. *Bentham.* A greenhouse shrub, much like *A. pulchella*. Flowers yellow. Native of Swan River. Introduced by Messrs. Lucombe & Pince.

A. Cycnorum, as its name implies, is an inhabitant of the Swan River settlement, where it appears to be common; and Meisner gives two varieties: but Mr. Bentham is rather inclined to think that this ought to be considered, along with *A. lasiocarpa* and *A. hispidissima*, among the varieties of *A. pulchella* of Mr. Brown. Be that as it may, it is a very handsome plant, and deserves a place in every greenhouse or conservatory where early flowers are required. Shrub two to three feet high, with rather slender and scattered terete green branches, clothed with somewhat dense spreading hairs. Spines none in our specimens. Leaves alternate, bipinnate. Petiole very short, without gland (in what we have examined). Rachis hairy. Pinnæ two pairs; the lower pair each with three, the upper with four, pairs of small oblong leaflets, when dry revolute at the margin. Peduncle rather longer than the leaves, axillary, slender,

arising from a scaly gemma. Head of flowers globose, rather deep yellow. Flowers crowded. Calyx turbinate, five-lobed, with spreading hairs in the upper half; the lobes short, very obtuse. Corolla four-lobed; lobes concave, ovate, erect. Stamens numerous. Style rather longer than the stamens.—*Botanical Magazine*, t. 4653.

PRIMULA DOLOMITIS. At the Auricula Society's meeting, in the spring of 1884, Mr. J. T. Dillwyn Llewelyn exhibited a distinct-looking plant from Panereggio, in the Tyrol. The following description by Mr. Baker conveys a clear idea of its appearance.

Leaves six to eight in a basal rosette, broad oblong, imbricated, sessile, rather leathery in texture, dull green, minutely hairy over the surface, distinctly crenate, white, and minutely ciliated on the margin, the largest about three inches long by two inches broad. Scape two to three inches long, terete, green, finely pubescent. Flowers eight to twelve in an umbel: bracts minute, deltoid, whitish, pubescent; pedicels cernuous, a quarter to a third of an inch long. Calyx green, pubescent, a sixth of an inch long; segments oblong, equalling the campanulate tube. Corolla a uniform bright lemon-yellow; tube cylindrical, half an inch long; limb broadly funnel-shaped, a third of an inch long; segments obovate, deeply emarginate, a quarter of an inch long, twice as long as the entire collar. Style short in the specimen seen, and anthers reaching nearly to the top of the tube.—*Gardener's Chronicle*, N.S., vol. xxi., p. 577.

VRIEZIA HIEROGLYPHICA. We have not seen this plant, but it is described as one of the handsomest of the Bromeliaceous group to which it belongs. The following notice of it appears in the *Gardener's Chronicle*, N.S., vol. xxi., p. 577.

Leaves oblong-acute, channelled on the upper surface, yellowish-green, marked with irregularly sinuous, transverse, rather broad purplish bars. Each leaf is about 70 to 80 centimetres long, 0·12 centimetre wide. From the above description, and an illustration of it given in the *Gardener's Chronicle*, it seems to be a very handsome plant. It will no doubt be found to thrive under similar conditions to others of the genus, that is, in an ordinary stove temperature with a humid atmosphere, kept moderately moist at the root, and potted in loose open soil, such as most Bromeliaceous Epiphytes like.

DENDROBIUM CRUENTUM. *H. G. Reichenbach, f.* A new species of Dendrobe which appears to be much like *D. tridentiforme*. With this, as in the case of many Orchids now introduced, there seems to be a disposition not to allow the country it comes from to be known; consequently, there is no clue to the treatment it will require. This used not to be so. The following is Professor Reichenbach's description of it.

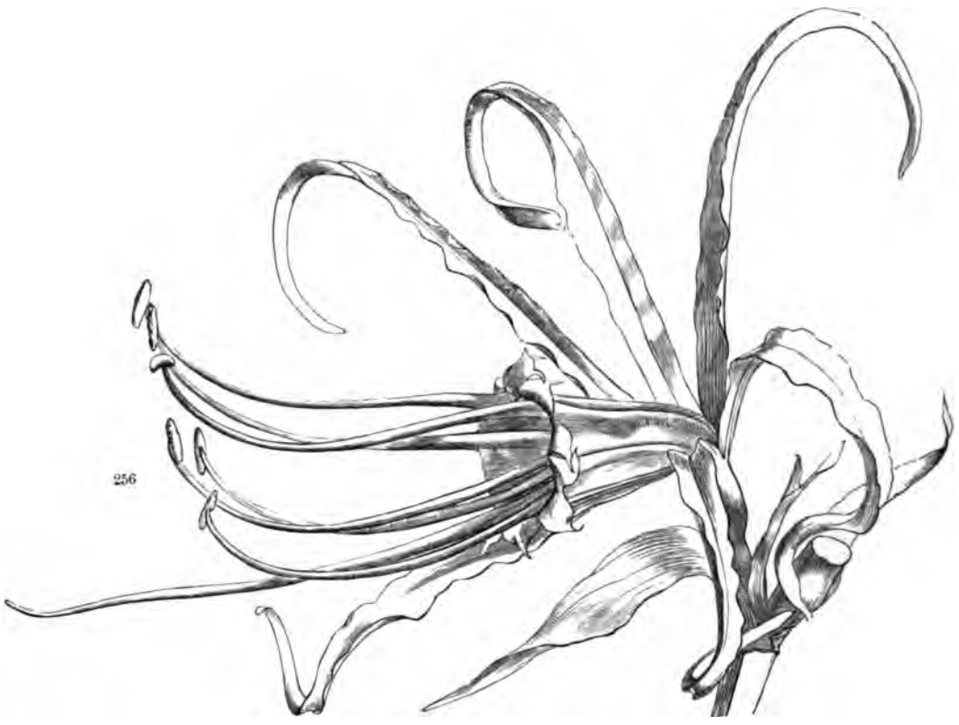
The linear acuminate petals, the falcate narrow side laciniæ of the lip, and the very long callus, with its gyrose brain-like anterior part, are quite distinct from the oblong acute petals, the broad falcate side laciniæ, and the very small median callus of the old *D. tridentiferum*. Sepals triangular acuminate, the lateral ones with a very well-developed, nearly rectangular chin. Petals linear acuminate. Lip mostly deeply trifid; side laciniæ falcate, erect, central lacinia ovate apiculate, with a nearly microscopically muriculate border. The large oblong tumid callus has an anterior gyrose surface which may be compared to the surface of the brain; the upper part is not gyrose, but nearly smooth, with five blunt elevations, including the outer ones. The column is broader at the base than at the tridentate top, and has the whole base a little concave, though there is no distinct abrupt cavern-like hollow there, as in numerous Dendrobia. What I see of the colour is that the flower is whitish, with a strongly marked cinnabar callus, and three similar cinnabar ascending lines with two interposed small teeth from the base to the middle of the column.—*Gardener's Chronicle*, N.S., vol. xxi., p. 604.

LEIOPHYLLUM BUXIFOLIUM. This is a dwarf hardy shrub, from the United States, that has been long in cultivation, but is not nearly so well known as it deserves to be, for which reason we here notice it. The flowers are produced in the greatest profusion in close compact corymbs; the petals are white, tipped with pink. In general character it is most like the Ledums so often met with in shrubberies.

A small rigid bush, twelve to eighteen inches high, much branched, and copiously leafy. Leaves opposite and alternate, spreading and recurved, shortly petioled, about half an inch long, thickly coriaceous, ovate or obovate, obtuse, quite entire. Flowers very numerous, about a quarter of an inch in diameter, in crowded terminal umbelliform corymbs, white with pink tips and backs to the petals; pedicels half an inch long, very slender, with minute bracts at their base. Sepals lanceolate, acuminate. Petals nearly twice as long as the sepals, elliptic, subacute, concave, spreading. Stamens ten, filaments very slender, five of them as long as the petals, five longer; anthers small, red-brown, opening by slits. Disk crenate. Ovary ovoid, glandular; style short; stigma simple.—*Botanical Magazine*, 6752.

DENDROBIUM PURPUREUM (*Roxb. nov. var.?*) (*vel nov. sp.*) MOSLEYI. *Hemsl.* There seems to be some uncertainty whether the plant under notice is the long known *D. purpureum*, or merely a variety; this will be seen by the following, which is Mr. Hemsley's account of it.

The singular *Dendrobium purpureum* is a native of the Moluccas, and was cultivated in the Calcutta Botanic Garden at the beginning of the present century, and more recently at Buitenzorg, in Java; and Miquel has figured it in his "Choix des Plantes," but I have found no evidence of its ever having been cultivated in this country. It differs so markedly from all other described species of its numerous genus that it is easily recognised. The bright purple flowers are about three-quarters of an inch long, cylindrical in shape, and arranged in dense, spherical, sessile clusters, which are produced from the nodes of the old leafless, spindle-shaped stems of many years' duration, and usually three or four feet long. At Kew there is a plant bearing one cluster of flowers that is so like *D. purpureum* in all its characters, that in the absence of specimens for comparison I place it as a variety, though it may prove sufficiently distinct to be entitled to rank as an independent species. It differs in having white flowers tipped with green, and apparently less pointed tips to the parts of the perianth. The bracts, too, are ovate-acuminate, not cordate, as described for *purpureum*.—*Gardener's Chronicle*, N.S., vol. xxi., p. 604.



ELISENA LONGIPETALA. *Lindley.* A half-hardy bulbous plant. Flowers white tinged with green. Native of Peru. Belongs to Amaryllids. (Fig. 256.)

This plant was first noticed in the *Botanical Register* for 1838, p. 45 of the miscellaneous matter, with the following memorandum:—

"To the cultivators of bulbous plants this fine species will form a welcome addition. It is very nearly related to the *Pancratium ringens* of the Flora Peruviana, out of which Mr. Herbert has formed his genus Elisena, and, like it, is a native of Peru. It was obtained from Lima by Richard Harrison, Esq., of Aighburgh, near Liverpool, and it blossomed in the stove of that gentleman in May, 1838. The leaves are much like those of an Amancaes; the flowers are of a delicate semi-transparent white, and are remarkable for their long weak sepals, which are rolled up, and in that state scarcely wider than the long white declinate stamens."

Its flowers were sent us by an unknown correspondent, and have enabled us to give the following figure of one of them. About five such grow in an umbel at the end of a stiff two-edged scape, about three feet high. Dean Herbert's figure, in the *Botanical Magazine*, t. 3873, does not at all do justice to the species, which is really very handsome. He recommends it to be grown out of doors in a bed of white sand, and guarded against spring frosts.

BRACHYSEMA LANCEOLATUM. *Meisner.* An evergreen greenhouse shrub, with rich crimson flowers. Belongs to the Leguminous order. Native of Swan River. Introduced by Messrs. Lucombe and Pince.

A handsome species, and its beauty is enhanced by the good-sized almost polished leaves, dark green above, beautifully silky beneath. It is a native of Swan River, and was raised from seeds sent home by Mr. Drummond, in the Exeter Nursery of Messrs. Lucombe, Pince, and Co., where it flowered for the first time in February, 1852. It is one great charm of the Australian plants that they so generally flower when there is little else to enliven the conservatory, and this cannot fail, on that account, to be very acceptable to cultivators. Dr. Meisner had evidently very imperfect specimens to describe from, for he was ignorant of the colour of the corolla, which in the living and in the dried specimens of Mr. Drummond is of the richest scarlet; and he describes the flowers as solitary. Yet he has contrived to form three varieties. The leaves are certainly variable in form, even on the same individual branch. A handsome though somewhat straggling shrub, with terete, silky branches, and usually opposite leaves, from two and a half to three inches long, shortly petiolate, varying from ovate to lanceolate, rarely obtuse, usually acute and mucronate, quite entire, penninerved, the upper surface dark green, and when dry beautifully and minutely reticulated. Petioles at most two lines long, with a subulate, coloured stipule on each side, eventually probably deciduous. Flowers four to six, on a sessile subcompound raceme in the axils of the leaves, and shorter than the leaves. Bracteas ovate, acute, silky. Pedicels short. Calyx large, ovate, five-lobed; lobes acuminate, erect. Corolla, all at least that is distinctly visible, rich scarlet; for the *alæ* and *vexillum* are scarcely protruded beyond the calyx, while the carina is twice the length of the latter. The small vexillum is cordate, attenuated, yet obtuse, white at the margin, red in the disk, with a large yellow spot in the centre. Stamens ten, free. Ovary oblong, silky. Style subulate-filiform. Stigma obtuse.—*Botanical Magazine*, t. 4652.

CORDYLINE INDIVISA. *Kunth* (*alias* Dracæna indivisa, *Forster*). A greenhouse arborescent Yucca-like plant, native of New Zealand. Flowers in large whitish fragrant panicles. Belongs to Lilyworts. Introduced by Messrs. Veitch, of Exeter.

A portion of this noble plant, consisting of a few leaves and a piece of the inflorescence, was exhibited by Messrs. Veitch, of Exeter, at a meeting of the Horticultural Society, it having flowered in their nursery at Exeter for the first time in Europe. It is stated to be an inhabitant of Dusky Bay, in New Zealand, where it grows as much as eighteen feet high on rocks near the sea. At Exeter it forms a noble specimen, twelve or fourteen feet high, with a single graceful stem, terminated by hard sharp-pointed sword-shaped leaves nearly four feet long by two inches wide, and narrowed into a very slender point; they are pale bright green, and perfectly smooth to the touch on both sides. From their centre springs a panicle some three or four feet long, of many compound branches, the ultimate divisions of which are graceful many-flowered angular spikes. Each flower sits in the middle of ovate scarious bracts, and consists of a short cup with a white six-parted spreading limb, of narrow blunt concave segments, at the foot of each of which is placed a stamen with a broad petaloid filament. The ovary is obovate, three-celled, with many axile ovules in each cell; the style is filiform, the stigma simple. The plant is, therefore, a *Cordyline*, and not a *Dracæna*. Nothing can be more deliciously fragrant than the flowers of this fine plant, which reminds the observer of the stately *Yucca draconis*, of which it has all the habit, but much lighter green leaves. It has lived for many years in the open ground in the Exeter Nursery, and seems there to be quite hardy. According to Richard it produces blue globose berries, each marked with three excavated points near the end, and containing about seven dark smooth roundish, half-moon-shaped seeds in each cell.

COFFEA TRAVANCORENSIS. A dense growing shrub from Southern India, clothed with smallish leaves. It bears white flowers, in appearance like those of a Bouvardia; they are produced from the joints of the young shoots towards the extremities. The plant—which was flowering at Kew in the summer of 1883—is more interesting than beautiful, yet will be prized by some on account of its affinity with the berry-bearing species of commerce.

A bushy shrub three to six feet high, copiously leafy. Branches slender, obscurely quadrangular, tips obscurely puberulous, bark brown. Leaves three to four inches long, very variable in shape from broadly ovate to lanceolate, obtuse, acute, or drawn out into a long obtuse or acute point, membranous or thinly coriaceous; stipules very small, triangular. Flowers solitary or three to four together in the axils of the leaves, shortly pedicelled, erect, minutely bracteolate under the calyx, white, sweet-scented. Calyx very small, tube cylindric, puberulous, truncate or minutely five-toothed. Corolla white, tube three-quarters of an inch to one inch long, very slender;

limb two-thirds of an inch to one inch in diameter, lobes ovate or lanceolate obtuse. Anthers included, linear, sessile, their tips only exserted.—*Botanical Magazine*, 6749.

GREVILLEA ACANTHIFOLIA. *A. Cunningham.* A half-hardy evergreen shrub from Australia. Flowers purple, in April and May. Belongs to Proteads. (Fig. 257.)

There is no doubt that some of the Proteads from New Holland are very nearly if not quite hardy. *G. sulphurea* and *rosmarinifolia* are open ground bushes at Exeter, and this, always regarded as a greenhouse plant, requires no protection in Dorsetshire, where it flowers in the border among other shrubs, with the Hon. W. F. Strangways. The species is said to have been found by Allan Cunningham in peaty bogs on the Blue Mountains and banks of Cox's river during Oxley's expedition into the interior in 1817; and was shortly after raised at Kew. In the *Botanical Magazine* Dr. Graham has given the following description of the plant as he saw it in Mr. Cunningham's Nursery at Comely Bank, near Edinburgh:—"Shrub erect; stem round, bark brown, branches scattered, angular, green. Leaves scattered, pinnatifid, rigid, smooth on both sides, revolute in their edges, dark green above, paler below; pinnæ wedge-shaped at the base, trifid, segments tipped with a spine; middle-rib of the leaf, pinnæ and pinnulæ prominent below. Racemes terminal upon short branches, opposite to the leaves, spreading. Flowers all turned upwards, refracted, sessile. Calyx lanato-sericeous on the outside, purple within and smooth, segments at length distinct, deciduous. Anthers dark red orange-coloured, after shedding the pollen yellow, bilocular, sessile. Germen stipitate, silky, lateral, gland on the anterior side of the base of the footstalk, lobular, semicircular, secreting abundance of honey. Style curved, quite smooth, and shining pink. Stigma flattened, set straight on the top of the style, green, or bursting from the calyx; it carries on its centre a round and prominent mass of the dark-coloured pollen."

257

CEANOTHUS VERRUCOSUS. *Nuttall.* A hardy evergreen shrub from California, with pale bluish flowers. Belongs to Rhamnads. Introduced by the Horticultural Society.

The discovery of this pretty and, as it proves, hardy evergreen shrub is due to the venerable Mr. Nuttall, who found it at Santa Barbara, Upper California. Our plants are derived from the Horticultural Society, who appear to have received the seeds from Hartweg, while he was in California, under the name of "*C. integerrimus;*" but by that name he could not intend the plant so called of Hooker and Arnott, in the *Botany of Beechey's Voyage.* The plants have borne the open air in the Arboretum at Kew for two winters, and flower readily in April and May. Our specimens have been carefully compared with Mr. Nuttall's original ones, and they seem entirely to agree. The foliage in our plants is rather larger and generally more orbicular, a change that may be due to cultivation; and in both the leaves are very variable, even on the same specimens. Our flowers are very pale purplish-blue. They would appear "white" in the dried plant as described by Torrey and Gray. Our plant is nearly four feet high, much branched, with opposite and more or less spreading branches, which are terete, glabrous, studded at the nodes with two to four large, brown, ovate, acute, warty excrescences. Leaves opposite, and generally bearing a fascicle of young leaves in their axils, oval or cuneate, or orbicular-cuneate, or quite orbicular, almost sessile, very entire or more or less dentate, coriaceous, dark green, persistent, quite glabrous and glossy, and obscurely penninerved above, paler beneath, strongly penninerved and reticulated, the areolæ of the compact reticulations minutely villous. Corymb from the apex of small lateral branches: the rachis elongated, fleshy, indented as it were to receive the pedicels. Flowers pale purplish-blue. Calyx of five erecto connivent ovate segments. Pedicels unguiculate; the lamina cucullate. Stamens five; filaments subulate, nearly erect, opposite the petals. Ovary sunk in a fleshy disk, and surmounted by five lobes. Style thick. Stigmas three, capitate. Fruit in Mr. Nuttall's specimens as large as a small pea.—*Botanical Magazine*, t. 4660.

ARAUCARIA COOKII. *R. Brown* (*alias* Cupressus columnaris, *Forster*; *alias* Dombeya columnaris, *Forster*; *alias* Araucaria columnaris, *Hooker*). See our vol. ii., p. 162. (Fig. 258.)

In the *Bot. Mag.*, *t.* 4635, are the following remarks upon this plant, in addition to those made in the Journal of the Horticultural Society, and quoted at the place in our work above referred to.

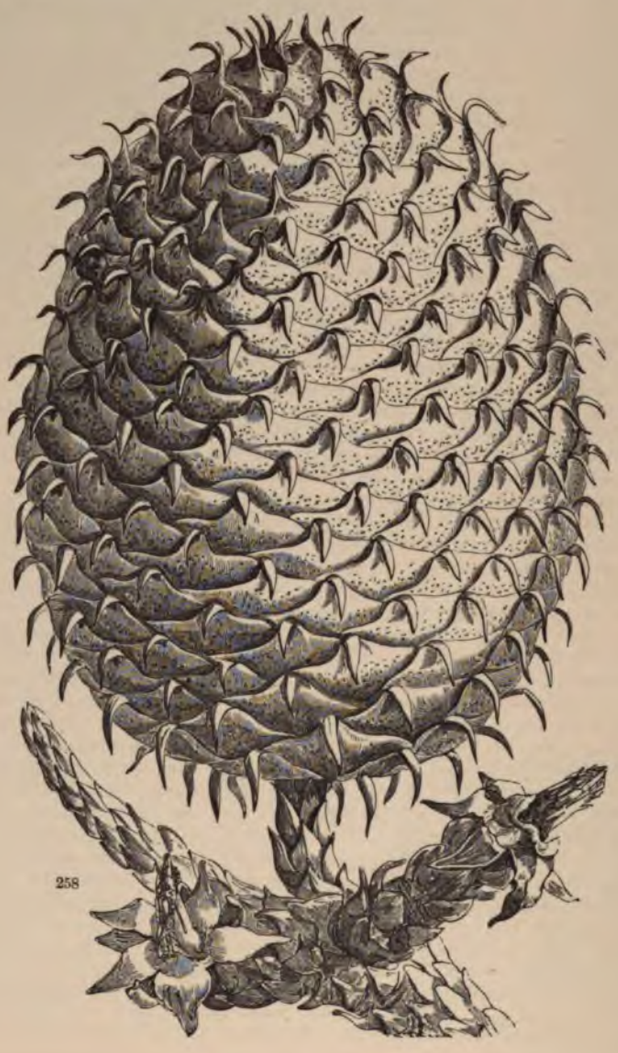
"To Capt. Cook, the great circumnavigator, in his second voyage, is due the first discovery of this *Araucaria*, in the little islands off New Caledonia, and subsequently on the main island:—'On one of the western small isles was an elevation like a tower; and over a low neck of land, within the isle, were seen many other elevations resembling the masts of a fleet of ships;' and again, a few days after, 'as we drew near Cape Coronation, we saw in a valley to the south of it a vast number of those elevated objects before mentioned, and some low land under the foreland was covered with them. We could not agree in our opinions of what they were. I supposed them to be a singular sort of trees, being too numerous to resemble anything else; and a great deal of smoke kept rising all the day from amongst those near the Cape. Our philosophers were of opinion that this was the smoke of some internal and perpetual fire. My representing to them that there was no smoke here in the morning would have been of no avail, had not this internal fire gone out before night, and no more smoke been seen after. They were still more positive that the elevations were pillars of basaltes, like those which compose the Giant's Causeway in Ireland.' On nearing the island, a few days later, 'every one was satisfied they were trees, except our philosophers, who still maintained they were basaltes.' To the commander 'they had much the appearance of tall pines, which occasioned my giving that name to the island.' 'I was, however, determined not to leave the coast till I knew what trees these were which had been the subject of our speculation, especially as they appeared to be of a sort useful to shipping, and had not been seen anywhere but in the southern part of this land.' At length Capt. Cook landed, accompanied by the Botanists. 'We found the tall trees to be a kind of Spruce Pine, very proper for spars, of which we were in want. We were now no longer at a loss to know of what trees the natives made their canoes. On this little isle were some which measured twenty inches diameter, and between sixty and seventy feet in length, and would have done well for a foremast to the Resolution had one been wanting. Since trees of this size are to be found on so small a spot, it is reasonable to expect to find some much larger on the main and larger isles; and if appearances did not deceive us, we can assert it. If I except New Zealand, I, at this time, knew of no island in the South Pacific Ocean where a ship could supply herself with a mast or a yard, were she ever so much distressed for want of one. My carpenter, who was a mast-maker as well as shipwright, was of opinion that these trees would make exceedingly good masts. The wood is white, close-grained, tough, and light. Turpentine had exuded out of most of the trunks, and the sun had inspissated it into a rosin, which was found sticking to them, and lying about the roots. These trees shoot out their branches like all other pines, with this difference, that the branches of these are much smaller and shorter; so that the knots become nothing when the tree is wrought for use. I took notice that the largest of them had the smallest and shortest branches, and were crowned as it were at the top by a spreading branch like a bush' (probably occasioned by their having been formerly densely crowded, and the tallest having most liberty at the top). 'This was what led some on board into the extravagant notion of their being basaltes: indeed, no one could think of finding such trees here.'

"There cannot be a doubt that this resemblance to columns of basalt induced the elder Forster to call this tree *Cupressus columnaris*, though he has fallen into an error in considering the Norfolk Island Pine (*Araucaria excelsa*) to be the same, as we infer from his giving 'Norfolk Island' as a second habitat for it; notwithstanding that Capt. Cook, in his voyage, declared it to be different. 'This' (the Norfolk Island Pine) 'is a sort between that which grows in New Zealand, and that in New Caledonia; the foliage differing something from both, and the wood not so heavy as the former, nor so light and close-grained as the latter.'—Of the New Caledonia Pine no perfect cones were found by the 'philosophers' of Capt. Cook's voyage; but a fine apex of a branch and young cone were brought home, and are preserved in the Banksian Herbarium, and figured in Mr. Lambert's splendid work, under an impression that the species was identical with that of Norfolk Island, and on the same plate with the perfect cone of the latter species. Why, under these circumstances, Mr. Lambert did not adopt Forster's name of *columnaris* we cannot conceive: we think it only justice to the latter author to restore it to that particular species for which it was intended, and to which it is so very appropriate; we would otherwise gladly have adopted Mr. Brown's excellent one:—for assuredly nearly all the particulars we know of this interesting Pine are derived from the narrative of the illustrious navigator. Singular enough, as Dr. Lindley quotes from Mr. Moore's letter, 'the first tree of this, noticed by Capt. Cook (in 1774) as "elevated like a tower," still stands (1850) and is in a flourishing condition. Its appearance now is exactly that of a well-proportioned factory chimney of great height.' The species is no doubt equally tender with the Norfolk Island Pine."

The remarks on the nomenclature of plants made at p. 125 of our present volume explain why we cannot acquiesce in the name imposed upon the present Conifer by our highly valued friend, Sir W. Hooker. Acting upon what we think the erroneous principle of preserving under all circumstances the specific name first given by authors to a plant, however grave may have been the errors by which that name was accompanied, our able contemporary would abolish the name of *Araucaria Cookii*, and substitute that of *A. columnaris*. Let us examine the circumstances which are said to justify this measure. The plant in question was supposed by Forster, the first botanist who saw it, to be a *Cupressus*, and he called it *columnaris*, which, had it been a Cypress, would have been a characteristic name. But it proved to have no claim to stand in the genus where it was placed, and he afterwards published it as *Dombeya columnaris*, under which name he so mixed up the present plant and the Norfolk Island Pine, that there is no

certainty what he meant. When Mr. Robert Brown referred to Araucaria that plant which the late Mr. Lambert had published, in his splendid monograph of Pines, under the name of *Dombeya excelsa*, he decided, and we think rightly, that he was not called upon to go back to the name of *columnaris*, applied to Dombeya, a cancelled genus, and he preferred the well-known, though more modern, name of *excelsa*. At the same time he would seem to have been aware that Forster had confounded two different species, and to have named the new Caledonian Pine *A. Cookii*, as we learn from a statement made by the late David Don in the Linnean Transactions. That name, *A. Cookii*, was adopted in Endlicher's *Synopsis Coniferarum*, and was received in the Journal of the Horticultural Society. Nevertheless it is exchanged in the Botanical Magazine for the obsolete *columnaris*, upon the ground of posteriority of publication, although the name *columnaris* was given to a *Cupressus* or *Dombeya*, not to an *Araucaria*, although all the *Araucarias* are columnar, and the name is therefore inappropriate, and most especially although the revival of Forster's obsolete name can only tend to increase that rampant confusion among the names of plants, of which every one complains with so much truth.

The accompanying figure of the Cone is borrowed from the Journal of the Horticultural Society.



258

THE BELL-FLOWERED SPATHODEA.
(SPATHODEA CAMPANULATA.)

[PLATE 103.]

THE BELL-FLOWERED SPATHODEA.

(SPATHODEA CAMPANULATA.)

A Magnificent Hothouse Shrub, from TROPICAL AFRICA, *belonging to the Natural Order of* BIGNONIADS.

Specific Character.

THE BELL-FLOWERED SPATHODEA.—A tree, apparently smooth. Leaves alternate, unequally pinnate; the leaflets of four pairs, lanceolate, quite entire. Raceme terminal, somewhat branched. Calyx velvety in longitudinal lines, curved at the point. Corolla campanulate, smooth, with a nearly equal limb.

Spathodea campanulata: *Palisot de Beauvois, Flore d'Oware et de Benin*, I. 47, t. 27; *De Candolle, Prodrom.* 9, 208; *Bentham, in Hooker's Niger Flora*, p. 461; *alias* Spathodea tulipifera: *G. Don; alias* Bignonia tulipifera: *Schumacher and Thonning, Beskryving*, p. 273.

THIS gorgeous plant produces its flowers in August. It has a fine Ash-like habit, producing great opposite pinnate leaves, with broad leaflets, from among which come the glorious racemes of Tulip-like tough leathery fiery-orange flowers, six or seven together; they are quite as handsome as the wild specimens before us from the Niger, where it was found on Stirling Hill by poor Ansell.

Palisot de Beauvois says it is a middle-sized tree, with wood smelling strongly of garlic when broken. He only found one specimen three leagues north of Chama.

In the *Niger Flora* Mr. Bentham speaks of the plant thus:—

"Although the descriptions differ in several points, there is every reason to conclude that Beauvois' and Thonning's plants belong to one species. Beauvois' characters are generally drawn up from mere fragments, his drawings made on the spot of this and other

plants having been destroyed by fire at St. Domingo, and he is very likely to have committed the mistake of describing the leaves as alternate instead of opposite. The corollas in Ansell's specimens are fully as large as those figured by Beauvois; those which are well dried are even larger; Thonning says they are as large as the largest Tulips. The leaflets in Ansell's plant are rather broader than in Beauvois'; they are covered on the under side with a minute tomentum, which is scarcely perceptible in the older leaves; they are also marked on the same side with innumerable small black dots, only visible under a lens. Thonning's detailed description is very accurate."

We believe the introduction of this plant to our gardens is owing to Mr. Whitfield, well known as an indefatigable collector of objects of natural history in tropical Western Africa.

THE CHINESE ALTHÆA FRUTEX
(HIBISCUS SYRIACUS; VAR CHINENSIS.)

[PLATE 104.]

THE CHINESE ALTHÆA FRUTEX.

(HIBISCUS SYRIACUS; VAR. CHINENSIS.)

A Beautiful Stove Shrub, Native of CHINA, *belonging to* MALLOWWORTS.

Hibiscus syriacus: *Linnæus.*

THE common *Althæa frutex* is said upon no very good authority to be a native of Palestine, and even of Carniola; but it does not appear to have been known to the Greeks, and Forskähl expressly states that it is a garden plant in Egypt. *Colitur in hortis Ægypti; floribus splendidis; aut toiis violaceis, vel albis, basi rubris.* (Fl. Ægypt. Arab., p. 125.) Its real country must in truth be regarded as unknown; it, however, appears to be very common in the east of Asia, but always cultivated. Thunberg tells us that it is grown everywhere in Japan for live fences, and that it is the *Kin* of Kæmpfer. Of this *Kin* the latter author tells us that it is also called *Mu Kunge*, that it is cultivated, and has in one state single flowers, blue shading into purple, *flore in purpureum cæruleo*, in another state double tinged with blue, *cæruleato*, with dense crisp petals, but neither style nor stamens. (Amœn. exot. 858.)

One of these forms is now before the reader in the accompanying plate, drawn in the garden of the Horticultural Society, where it had been raised from seeds presented to the Society by John Reeves, Esq., in June, 1844, under the name of *Koorkun Vellory*.

The editor of the Society's journal speaks thus of the plant itself:—

"I think there can be no doubt that this, although certainly Chinese, is a mere variety, and not a well-marked one, of *Hibiscus syriacus*. It has large violet flowers, with a crimson

eye, and its leaves are larger, thinner, and more smooth than in the shrub out of doors, owing, perhaps, to having been grown in a stove. But the last circumstance is evidently unimportant, for in Mr. Fortune's wild specimens now before us, the leaf-stalks are perfectly shaggy. This traveller found it forming a shrub eight to twelve feet high, with light 'blue' flowers, in the hedges and on hill-sides on Poo-too-san, and other islands.

"When growing in a stove, with the same kind of treatment as is required by the well-known *Hibiscus rosa-sinensis*—that is to say, if grown in a mixture of sandy loam, peat, and leaf-mould—it forms a very handsome shrub, flowering in July and August."

GLEANINGS AND ORIGINAL MEMORANDA.

BURLINGTONIA DECORA. *Lemaire* (*alias* B. amœna, *Planchon in Hort.*). A beautiful epiphyte from Brazil. Flowers rose-coloured spotted with red, and a white lip. Introduced by M. de Jonghe, of Brussels. (Fig. 259.)

B. decora; pseudobulbis compressis ovatis monophyllis, foliis lanceolatis subundulatis recurvantibus racemis laxis 3—5 floris, sepalis petalisque conniventibus acutis lateralibus vix semiconnatis, labello multò longiore bilobo dilatato basi appendice lacero pubescente flabellato colorato utrinque aucto, calcare conico brevi—"staminodiis antenniformibus pilosis rubris gynostemium æquantibus, styli cornubus glabris staminodiis plus duplò brevioribus."—*Planchon.*

This very pretty epiphyte has been figured by M. Van Houtte in his *Flore des Serres*, with a note by M. Planchon, of which the following is the substance:—Introduced from the province of St. Paul's, in Brazil, by M. Libon, the collector for M. de Jonghe, this flowered in May, 1851, with M. Makoy, when it was provisionally named *B. decora*, under which name it is mentioned in various trade catalogues. It was afterwards published as *B. decora* by M. Charles Lemaire, in the "*Jardin Fleuriste, II., jan.* 1852, *t.* 188."

The habit is that of *B. rigida*, but the sepals and petals are deep rose-colour, spotted with small irregular crimson specks; the lip, which is twice as long as the sepals, is pure white, with a lacerated pinnate red and speckled appendage on each side of the base. It seems to prefer a mixture of sphagnum, rotten willow-wood, and broken potsherds, in which it succeeds perfectly suspended in a basket of copper wire. It likes a hot damp atmosphere while growing, and a good season of rest, obtained by lowering the temperature and diminishing the humidity of the atmosphere.

M. Planchon naturally compares it with a *B. obtusifolia*, very slightly defined in the *Sertum Orchidaceum*, under t. 36; and it is indeed a member of the same division of the genus, characterised by the column bearing a pair of long hairy ears (staminodia). But *B.obtusifolia* is in reality very near *B. rigida*, from which it only differs in the ears being blunter and longer, the leaves smaller, narrower, more blunt, and tapering to the base, the flowers smaller, and the

lateral lobes of the lip much narrower. In this plant, however, we have, according to the authors above quoted, much smaller flowers, a simple conical not two-lobed spur, short very sharp sepals and petals, and a pair of great lacerated appendages at the base of the lip; to say nothing of the spotting which is so much unlike anything known among Burlingtonias, except *maculata*.

OLEARIA GUNNIANA. *Hooker fil.* (*alias* Eurybia Gunniana, *De Candolle*). A half-hardy shrub, native of Van Diemen's Land. Flowers white. Belongs to Composites. Introduced at Kew.

This is another interesting plant of Van Diemen's Land, which braves the cold of England, and even the vicinity of London, provided it be trained against a wall. In such a position it has long been cultivated in the Royal Gardens of Kew, flowering copiously late in the autumn. We wish it had more beauty to recommend it. It was raised from seeds sent by Mr. Gunn, by whom, as its name implies, it was first detected. We think Dr. Hooker has properly referred it to *Olearia*, and that *Eurybia subrepanda*, De Cand., is merely one of the many forms of the same variable species; variable especially in the size and incision of the leaves, and scarcely less so in the length of the peduncles and the more or less crowded flowers. Sometimes the blossoms are as copious as the leaves. A moderate-sized bushy shrub, very much branched, ultimate branches often very short. Leaves numerous, varying much in length in our native specimens, from half an inch to two inches long, on short petioles, oblong or linear-lanceolate, generally rather deeply sinuato-dentate at the margin, penninerved, the nerves deeply impressed above, and there the surface is nearly quite glabrous, often wrinkled with reticulated veinlets: below, as on the branches, peduncles, and involucres, white with dense compact tomentum. Peduncles subterminal, on short branches, single-flowered, or elongated and panicled with several flowers or capitula, bracteolated. Involucre of several small imbricated downy scales. Florets of the ray white, of the disk yellow. Achenium, at least of the central florets, punctato-tuberculate. Bristles of the pappus rough, the scales lanceolate, with fringed serratures, sufficiently hardy to thrive in the open air of this climate in mild winters. It forms a low evergreen bushy shrub, well suited for the front row of shrubbery borders. In summer, when in flower, it presents a very showy appearance, which makes it worth while to keep a stock of young plants under protection to meet the casualties of a severe winter. It flowers freely if treated as a greenhouse plant, and is readily increased from cuttings.—*Botanical Magazine*, t. 4638.

STEUDNERA COLOCASIÆFOLIA. A stove Aroid that produces highly coloured bloom spathes, deep reddish-purple above, the under side yellow. It is in the Kew collection, where, we understand, it blooms regularly each season early in spring.

Stem very short, two to three inches high. Leaves crowded on the top of the stem; petiole rather slender, twelve to eighteen inches long, dull green; blade a foot long, ovate-oblong, acuminate, base retuse, dark green above, pale and glaucous beneath. Peduncle half as long as the petiole, rather slender, terete, dull green, streaked with dull red. Spathe oblong lanceolate, long-acuminate, reflexed and sharply subrevolute, inner surface deep red-purple, outer dull yellow. Spadix one and a half inches long, rather slender but club-shaped, pale yellow, curved or inclined. Male flowers, densely crowded and covering the clubbed apex. Female flowers, ovaries crowded, subglobose; stigma of five sessile rays; ovules many, on five parietal placentas, orthotropous, funicles slender.—*Botanical Magazine*, 6762.

HYMENOCALLIS EUCHARIDIFOLIA. *Baker*. The description given by Mr. Baker conveys an idea that this is a distinct looking species, but not equal in appearance to others of the family, amongst which may be enumerated some of the most beautiful flowering stove bulbs we possess. It will doubtless thrive under like conditions to other allied species, that is, with plenty of heat, light, and moisture during the growing season, with a lower temperature and drier state of the soil when at rest, but never subjected to too low a temperature even in the winter.

Bulb ovoid, with thin brown outer tunics. Leaves four, thin, bright green, contemporary with the flowers, oblong, one foot long, three to three and a half inches broad at the middle, with about fifteen distinct veins between the margin and midrib, branching off from the latter as in a Eucharis; blade nearly sessile, with a midrib half an inch broad at the base. Scape ancipitous, one foot long. Umbel of four to five sessile flowers. Spathe valves withered by the time the flowers are fully expanded. Ovary oblong-trigonous, under half an inch long. Perianth with a slender green tube four inches long; segments linear, deeply channelled down the face, three to three and a half inches long. Corona white, regularly funnel shaped, one and a quarter inches long, one inch across at the throat, with two distinct cusps on the edge between each filament; free portion of each filament one to one and a quarter inches long; anthers linear, half an inch long. Style green, exserted beyond the anthers. No distinct scent. —*Gardener's Chronicle*, N.S., vol. xxi., p. 700.

GUICHENOTIA MACRANTHA. *Turczaninow.* An inelegant greenhouse shrub, with pale purple veiny flowers. Native of Swan River. Belongs to Byttneriads. Introduced at Kew.

A singular-looking, rather than beautiful, hoary shrub, with large purplish flowers, at first sight not unlike those of some Solanum; native of Swan River, whence seeds have been sent by Mr. Drummond to Kew, and reared in 1847. Our first flowers appeared in March, 1852, in an ordinary greenhouse. The genus Guichenotia, so named by Mr. Gay, in compliment to the gardener of M. Baudin's expedition, M. Antoine Guichenot, was founded upon the *G. ledifolia*, equally with this an inhabitant of the Swan River district, and is described by Mr. Turczaninow from Mr. Drummond's dried specimens. It is an extremely distinct species. The shrub is with us two and a half feet high, erect, branched. Branches terete, clothed with stellated down. Leaves downy, whorled in threes, linear-oblong, on very short petioles, entire, penninerved, the nerves almost at right angles from the costa, transverse, slightly branched, the margin revolute. Peduncles axillary, generally longer than the leaf, erect, few-flowered; flowers one to three, drooping. Pedicels naked, or bearing one to two lanceolate distinct bracts; the hypocalycinal bract tripartite, appressed, leafy, veined. Calyx between rotate and campanulate, dull and pale purple, downy, veined, the five lobes acuminate. Petals five, small, squamiform, dark purple, one at the base of each stamen. Stamens converging into a cone against the pistil; filaments subulate; anthers dark purple. Germen ovate, acuminate, downy. Style articulated upon the ovary, about equal to it in length, slender, subulate. Stigma obtuse.—*Botanical Magazine*, t. 4651.

MASDEVALLIA FLAVEOLA. *H. G. Reichenbach, f.* To those desirous of possessing complete collections of this strange genus of Orchids, including the kinds chiefly attractive for the singularity of their flowers, as well as those with size and brilliancy of colour, this new species will be acceptable. It is described as follows by Professor Reichenbach.

At first sight this might be regarded as *Masdevallia attenuata*, but it is not. The leaves are cuneate, obovate, or spatulate, and the slender peduncles, surpassing the leaves, have usually two or even three flowers. They are described as light yellow, yet I have a distinct impression that there are on each side two orange zones on the outer perigone. It has the side sepals very rounded at the top, and covered for some distance with the odd sepal. The tails, very narrow at the base, are dilated above, and exceed the cupular part of the perigone. It is one of those curios which the collector of Masdevellias will grow with pleasure. It was discovered by Herr Hübsch, in Costa Rica, for Mr. F. Sander, who has just imported a stock of it.—*Gardener's Chronicle*, N.S., vol. xxi., p. 638.

TULIPA KESSELRINGII. This handsome and interesting genus has had several remarkable additions of late, to which the plant under notice is another. The flowers of *T. Kesselringii* are not so large as some of the other recently introduced species. It will no doubt be found to succeed under ordinary treatment such as answers for the generality of hardy bulbs—a good free deep soil, free from stagnant moisture. Introduced from Turkestan.

Bulb middle-sized, globose, outer tunics dark brown, slightly strigose on the inner face. Leaves lorate-lanceolate, four or five crowded together at the base of the stem, sub-erect, half a foot long, slightly glaucous, channelled down the face, quite glabrous on the surfaces and margin. Peduncle terete, glabrous, four to eight inches long. Perianth campanulate, bright yellow, one and a half or two inches long; inner segments obovate-oblong, sub-obtuse, half an inch broad a little above the middle; outer oblong, acute, flushed with red and green on the back. Stamens bright yellow, less than half as long as the perianth; anthers obtuse, a quarter of an inch long, about equalling the filaments. Stigmas not quite equalling the ovary in diameter.—*Botanical Magazine*, 6754.

ODONTOGLOSSUM PESCATOREI LOWIANUM. The sterling qualities of *O. Pescatorei* are so well known to cultivators that it is not necessary to say more about this plant than that it is a beautifully spotted form of the favourite old species, and will no doubt be eagerly sought after by Orchid growers.

This grand thing was discovered by one of Mr. Low's travellers. The plant arrived and had the good luck to come into Sir Trevor Lawrence's hands. It is very long in the sepals and petals, which have numerous mauve spots and dots on a ground, the greater part of which is a fine light mauve, just as in the best *Odontoglossum crispum fastuosum*. —*Gardener's Chronicle*, N.S., vol. xxi., p. 638.

HAKEA SCOPARIA. *Meisner.* A long slender-leaved greenhouse shrub. Flowers in yellow heads. Native of Swan River. Belongs to Proteads. Introduced at Kew.

This species of *Hakea* is a native of the Swan River Settlement, and has been sent in seed with corresponding dried specimens (numbered 600) by Mr. Drummond. It is evidently the plant described by Dr. Meisner in the *Plantæ Preissianæ* above quoted, from specimens of Mr. Drummond in Mr. Shuttleworth's herbarium. The author, indeed, thinks it possible it may prove to be a variety of *H. sulcata*, but to us it appears unquestionably different, and the distinguishing characters are well pointed out by Dr. Meisner. A small shrub, with rather tortuous terete branches, clothed with pale grey bark, the younger ones puberulous. Leaves alternate, eight to ten inches long, about as thick as a blackbird's quill, elongated, filiform, rigid, semiterete, rather deeply five-furrowed throughout their whole length, the upper furrow the broadest, hairy in the furrows, the apex sharply mucronate, the base, where inserted upon the branch, a little swollen and dilated. Flowers pale yellow, arranged in sessile heads, which are axillary, involucrate, involucre of several imbricated, brown, pubescent scales, shorter than the heads. Pedicels as long as the perianth. Perianth of four spathulate pale yellowish-white sepals, the apices concave, reflexed. Style very long, a little dilated at the apex, and there bearing a nearly cylindrical stigma.—*Botanical Magazine*, t. 4644.

MAXILLARIA HARRISONIÆ. *Lindley*. A stove epiphyte from Brazil, with large waxy pale yellow flowers, and a rich rose-coloured hairy lip. Flowers in April and May. (Fig. 260.)

Of this common plant, with which all growers of Orchids are now acquainted, there are two striking varieties: one with nearly white flowers, except the lip, which is, as usual, rose-coloured; the other, now figured, with smaller flowers than common, a rather shorter spur, and a much narrower lip, which has clearer veins on its lateral lobes. The specimen figured was first exhibited by Mrs. Lawrence, and has since appeared in other collections. We should add that the pseudobulbs are rather narrower than in the original species, but the leaves are not at all different.

260

THE SPLENDID ÆSCHYNANTH
(ÆSCHYNANTHUS SPLENDIDUS)

[PLATE 105.]

THE SPLENDID ÆSCHYNANTH.

(ÆSCHYNANTHUS SPLENDIDUS.)

A Magnificent Stove Plant, of GARDEN ORIGIN, *belonging to the Natural Order of* GESNERADS.

OF this most beautiful plant we have the following account from Messrs. Lucombe, Pince, and Co., of Exeter, who raised it :—

"We have very great pleasure in sending you a cut specimen of our new *Æschynanthus splendidus*, which we think you will admire. It is a hybrid produced from *Æ. speciosus* impregnated with *Æ. grandiflorus*, and possesses the brilliancy of colour and hardy constitution of the male, whilst it also fully partakes of the many good qualities of the other parent.

"It is easily cultivated, producing a long succession of large umbels of brilliant coloured flowers, and requires much less heat than many other Æschynanths, a circumstance easily accounted for by the fact that *Æ. grandiflorus* has been frequently wintered by us in a cold pit, into which frost has sometimes penetrated. A figure of *Æ. splendidus* has been published in a contemporary in December last, but it did not by any means do justice to the subject, and the specimen I now send is better even than that from which the drawing was made. In no respect has this fine hybrid had that publicity given to it which such a plant merits."—*Exeter, Sept.* 7, 1852.

At a later period many small plants were exhibited to the Horticultural Society, for the purpose of showing how abundantly they blossom even in the youngest stage. They formed a brilliant circle, of which it is no exaggeration to say that all other colours became pale when contrasted with theirs.

THE THICK-LEAVED CLEISOSTOME
(CLEISOSTOMA CRASSIFOLIUM.)

THE THICK-LEAVED CLEISOSTOME
(CLEISOSTOMA CRASSIFOLIUM.)

[PLATE 106.]

THE THICK-LEAVED CLEISOSTOME.

(CLEISOSTOMA CRASSIFOLIUM.)

A Very Pretty Hothouse Epiphyte, from the EAST INDIES, *belonging to the Natural Order of* ORCHIDS.

Specific Character.

THE THICK-LEAVED CLEISOSTOME.—Leaves fleshy, channelled, curved, stiff. Panicle simple, with the branches closely spicate and nodding. Lip with the lateral lobes erect and very small, the middle one roundish, with a small recurved tooth on either side. Tooth of the spur blunt and fleshy.

A VERY distinct species of Cleisostome, imported from the East Indies by Messrs. Veitch and Co. It is remarkable for its thick tough aloe-like leaves, and panicles of dense sea-green flowers, singularly enlivened by a rose or violet lip. The inflorescence, too, although, as is customary among Cleisostomes, consisting of small flowers collected into dense spikes at the end of the branches, has a peculiar curved or drooping appearance, by which the species may be known irrespective of its foliage.

Sepals oval, blunt, nearly equal, spreading. Petals with a similar form and the same direction, but very much smaller. Lip with a blunt oblong spur, filled with honey, one-celled, and twice as long as the limb, of which the lateral lobes are very short and erect, and the middle one rounded, with a minute tooth near the base on each side, while the point is so much reflexed as to be hidden unless the lip is lifted up. At the base of the column stands the characteristic tooth in the form of a blunt fleshy process, partly closing up the

entrance to the spur. The pollen-masses are four, very small, pear-shaped and distinct, at the end of a filiform caudicle attached to an oblong gland. In this respect the plant is at variance with other Cleisostomes, such species as we have examined having the pollen-masses in pairs, the lobes of which are unequal and plano-convex.

We observe that the late Mr. Griffith inquires in his *Notulæ* (p. 358) why Cleisostoma is separated from Saccolabium and Sarcanthus. The differences among the three genera are these :—In Saccolabium the spur of the lip is one-celled, without any tooth at the foot of the column; to Cleisostoma and Sarcanthus that peculiar process is essential. In Cleisostoma the spur is absolutely one-celled, while in Sarcanthus it is more or less completely two-celled. It is a question, no doubt, whether Blume's genus Cleisostoma ought to be separated from Sarcanthus, but about the distinctness of Saccolabium we entertain no doubt.

GLEANINGS AND ORIGINAL MEMORANDA.

LÆLIA DOMINIANA ROSEA. A magnificent hybrid Orchid, the result of crossing *Lælia exoniensis* with the pollen of *Cattleya Dowiana*. It is one of the many fine kinds raised in Messrs. Veitch's Chelsea establishment. The sepals and petals are in form like those of *Lælia purpurata*, their colour is a pale shade of pinkish claret. The great attraction of the flower is in its unusually large flat lip, which is wholly of the darkest ruby crimson, intense and lustrous; at the extreme base of the lip there is a little orange colour. In form and size the leaves and pseudobulbs are like those of *Cattleya crispa*, being stout and erect. It, with the only other plant that resulted from the cross, is, we understand, now in the possession of Baron Schrœder.

SOLANUM MAGLIA. An old species of Solanum from Chili, long known in this country, and nearly allied to the edible potato (*S. tuberosum*). At the present time (1884) there is much interest attached to the plant under notice, from the fact that the Royal Agricultural Society are having experiments carried out in crossing it with some of the cultivated varieties of potato, the object of which is to infuse more vigour into the edible kinds, with a view to their greater ability to resist disease. Let us hope that success may attend their endeavours, than which few things would be a greater boon to the community, if, with disease-resisting powers, the edible properties are in no way reduced.

Nearly glabrous or sparsely pubescent. Tubers subglobose or oblong, the largest one to one and a half inches long in longest diameter, surface smooth, red-brown. Stem two feet high, erect, stout, branched, angled and winged. Leaves four to eight inches long; leaflets five to seven, the larger two to three inches long, ovate, or oblong, acute, waved, lateral petiolulate, base oblique, rounded or cordate; basal leaflets small, stipuliform; intermediate small leaflets few or none. Cymes compound, many flowered; pedicels slender. Flowers white, one inch in diameter. Calyx hirsute; lobes ovate-lanceolate, acuminate, longer than the tube. Corolla rotate; lobes short, broadly deltoid, subacute. Filaments very short; anthers orange yellow, linear-oblong. Style twice as long as the stamens.—*Botanical Magazine*, 6756.

LACHENALIAS. The different species of Lachenalia already known in gardens are deservedly favourites with cultivators of greenhouse plants. The ease with which even those with little experience can grow them, combined with their free habit of flowering and distinct appearance, make them deserving of being grown more extensively than they hitherto have been. The following new species, which have, we understand, been introduced by Mr. Ware, of Tottenham, are thus described by Mr. Baker:—

L. (*Chloriza*) *fistulosa*. Bulb depresso-globose, half an inch in diameter; outer tunics white. Leaves two, lanceolate, green, fleshy, unguiculate, four inches long, half an inch broad. Scape green, terete, as long as the leaves. Spike lax, two inches long, three-quarters of an inch in diameter; bracts minute, deltoid. Flowers fragrant, half an inch long; calyx ampullæform, one-third of an inch long, white tinged with sky-blue; sepals ovate-oblong, brown at the tip. Petals obovate-unguiculate, spreading at the top, white, edged with purple. Stamens as long as the calyx. Several upper flowers sterile, with larger bracts.

L. (*Chloriza*) *lilacina*. Bulb as in the last. Leaves two, lanceolate, falcate, fleshy, smooth, four inches long, one-half to three-quarters of an inch broad, glossy green, with copious, immersed, round, blackish spots. Scape slender, terete, four to five inches long, greenish-red, mottled with red-brown. Flowers about twenty, arranged in an oblong spike, two to three inches long, an inch in diameter, all strictly sessile; bracts minute, deltoid. Calyx oblong, bright lilac with a little blue at the base, quarter of an inch long; sepals ovate-oblong. Petals the same colour, half as long again as the sepals, spreading widely, obovate-unguiculate. Stamens as long as the calyx. Many upper flowers of the spike sterile, with larger lanceolate bracts.

L. (*Chloriza*) *odoratissima*. Bulb globose, half an inch in diameter. Leaves two, lanceolate, falcate, fleshy, green, much blistered over the face, half a foot long, one-half to three-quarters of an inch broad. Scape green, terete, shorter than the leaves. Raceme moderately dense, one and a half to two inches long, nearly one inch in diameter; lower pedicels one-twelfth to one-eighth of an inch long; bracts minute. Calyx a quarter of an inch long; sepals oblong, white, with green tip. Petals obovate-unguiculate, one-third of an inch long, the tips very spreading. Stamens as long as the petals.

The two first are nearest to *L. pustulata*, and the last to *L. Cooperi*.—*Gardener's Chronicle*, N.S., vol. xxi., p. 668.

VERONICA ELLIPTICA. *Forster* (*alias* V. decussata, *Aiton*). A hardy (?) evergreen bush, with deep green leaves and white flowers. Native of the antarctic and neighbouring regions. Belongs to Linariads. (Fig. 261.)

Beautiful flowering specimens of this were exhibited before the Horticultural Society, by the Hon. W. F. Strangways, with whom the plant is hardy in Dorsetshire. It forms a dwarf dark green bush, with opposite oblong leaves, each pair of which regularly crosses the previous pair, so as to produce the appearance which botanists call decussate, the name by which the plant is known in gardens. Dr. Hooker has, however, ascertained that in reality it is the same plant as the *V. elliptica* of Forster, published many years before the name *decussata* was heard of. Upon what ground this opinion has been formed will appear from the following extract from Dr. Hooker's excellent *Flora antarctica*, vol. i., p. 58:—

"Found in Lord Auckland's group and Campbell's Island; at the margins of woods near the sea, abundant.

"This is a very well-known plant in our gardens, introduced from the Falkland Islands, and is one of the most antarctic trees, both in this longitude and in that of extreme South America, there reaching the fifty-seventh parallel of latitude. It was first collected in New Zealand by Forster, its original discoverer, in Dusky Bay, where it has since been found by Anderson and Menzies. I believe it, however, to have been noticed before as a native of the States of Magalhaens, by the older navigators.

"In combining the *V. decussata*, Ait., with *V. elliptica*, I have followed the unpublished opinion of Dr. Solander. In the British Museum there are drawings of the latter plant by Forster, New Zealand specimens collected probably by that author, and notes by Dr. Solander. The specimens alluded to are in fruit only, and agree in the foliage with the figures, which represent it in its flowering state. Dr. Forster's own handwriting (of *V. elliptica*) is on the same sheet with it; but another plant, *V. Menziesii*, Benth., MSS., has been fastened down on the paper at a later period, and the habitat, 'New Zealand, Dusky Bay, Gul. Anderson,' is written on the back, a station probably applying to the latter specimen alone. Solander's handwriting of *V. decussata* β., at the bottom of the sheet, applies to both, as in his MS. he quotes both Forster and Anderson for the species. I am thus particular in alluding to the British Museum specimens, because there is a discrepancy between the plant of Forster as described by him, and our own, according to his MS. description, published by M. A. Richard, *l.c.*, where the tube of the corolla is described as being twice the length of the calycine segments, and the latter as subulate. In all our specimens, both from Lord Auckland's and Campbell's Islands, as also in those of Antarctic America, the tube of the corolla is a little longer than the calyx, sometimes as much as one-third, but it appears even more so before the expansion of the corolla; and by subulate, that author might have alluded to the acuminated apex which the segments sometimes have. Though Forster's drawing does not exhibit the calyx, it coincides too closely with the preserved specimen, and both with our plant, to leave any doubt in my mind that we have here another instance of the similarity of the vegetation of the higher latitudes. Dr. Solander, indeed, considers the New Zealand plant as a different variety from the Southern American, and in his MS. description of the southern species, to which I have access through the kindness of Mr. Brown, he separates the former as '*B. floribus carneis*

(Forster), ramis glabriusculis, frutex sesquipedalis.' In Forster's drawing, the mineral white, used to colour the flowers, has become discoloured; and the pink, alluded to by Dr. Solander, almost obscured; in our specimens they are of a pure milk-white, when fresh. The want of down on the branches arises from age.

"In Lord Auckland's group this species attains a much larger size than it does in America, there seldom exceeding four feet in height; whilst Forster describes the Dusky Bay tree as twelve feet, and I have seen it as much as thirty on the margins of the woods close to the sea, where it may be readily distinguished by its pale green foliage and erect branches. I saw but one specimen in full flower, growing on an inaccessible rock, overlooking Rendezvous Harbour; from a distance it looked powdered with white flowers."

261

EPACRIS NIVALIS. *Loddiges.* A half-hardy evergreen bush, from Australia. Flowers pure white. Belongs to Epacrids. (Fig. 262.)

This was introduced from New Holland by the late Henry Moreton Dyer, Esq., while vice-president of the Horticultural Society, who gave seeds of it, in 1829, to Mr. Loddiges, in whose Botanical Cabinet an excellent figure afterwards appeared. It forms an evergreen bush, which, when loaded like an Andromeda with hundreds of snow-white flowers, is exceedingly ornamental. Any greenhouse will afford it protection enough in winter, and in summer it will bear the open air of this climate. In Dorsetshire indeed it is found to be perfectly hardy; Mr. Strangways having furnished us with the specimen from which our cut was taken, from his garden at Abbotsbury. In the open air it is very much handsomer than in a greenhouse, dwarf, compact, and crowded with little white bells, nestling among the black-green leaves. It is not unlikely to stand even a London winter if placed in a Northern exposure.

262

PAULOWNIA IMPERIALIS. *Siebold & Zuccarini.* A hardy deciduous tree, belonging to the Natural Order of Linariads. Native of Japan. Flowers violet and sweet-scented.

The Right Rev. the Lord Bishop of Exeter sent two panicles from his favoured grounds of Bishopstowe, near Torquay. "The blossoms," his lordship writes, "are in terminal clusters; and the odour (which will probably be lost when it reaches you) is of a very delicate violet-like character."—"But, after all, the effect to the eye is rather disappointing; for the blossom precedes the leaves, which are not yet half out." The fragrance, so far from being lost on the journey, was rather increased, and the box retained the very agreeable odour some days after the flowers were removed. Unquestionably the absence of leaves, as the bishop justly observes, is a great deficiency, especially in a plant whose size prevents the blossoms from being closely inspected upon the tree; yet a cut panicle of these large pale violet-purple blossoms, as large as those of the Foxglove, with a young shoot of tender green leaves, is a very lovely object, to say

nothing of the fragrance as a further recommendation. Unfortunately it is only the climates analogous to the south of Devonshire where its blossoms can be reasonably looked for. About London we find our strongest and healthiest plants with their terminal shoots (which alone produce flowers) nipped, and more or less killed, by the winter's cold, or, what is worse, the biting north-east winds of spring. The summer-growth of this tree is almost everywhere, in the middle and south of England at least, remarkable: stout limbs are thrown out in a short time, bearing ample foliage; but these limbs are soft and succulent, the later shoots incapable of bearing a moderate frost. In France, even at Paris, the wood ripens better. Although forming a tree (in its native country, Japan, thirty to forty feet high), and bearing flowers like a Bignonia, and with a foliage and habit like Catalpa, the Paulownia belongs nevertheless to the Scrophularia family. Dr. Siebold considers it "un des plus magnifiques végétaux du Japon;" and partly on this account and partly "parce que la feuille ornée de trois tiges de fleurs a servi d'armes au célèbre héros TAIKASMA, est encore aujourd'hui fort en honneur en Japon,"—"nous avons pris la liberté de nommer PAULOWNIA ce nouveau genre, pour rendre hommage au nom de Son Altesse Impériale et Royale la Princesse héréditaire des Pays Bas." In Japan the trunk of the tree attains an elevation of thirty to forty feet. Its growth in Dr. Siebold's garden has been six to ten feet in one year, and in three years a diameter of four to five inches. The flowers appear in April, and are grouped in large compound panicles, like those of the Horse-chestnut. It appears most abundantly in the southern countries of Japan, flourishing in the valleys and on the sides of hills exposed to the powerful action of the sun.—*Botanical Magazine*, t. 4666.

PASSIFLORA CONSTANCE ELLIOTT. A new seedling variety of *Passiflora cærulea*, with white flowers, exhibited by Messrs. Lucombe, Pince, and Co. at one of the Royal Horticultural Society's meetings in the spring of 1884, where it was awarded a First-Class Certificate. So far as could be judged by the example shown it is a counterpart of the well-known blue species, except in the colour of the flowers. The contrast in colour in the yellow tips on a portion of the corona threads and the white petals is effective, giving the flowers a pleasing appearance. Hardy climbing plants with handsome flowers are not too plentiful, and the one under notice may be looked on as an acquisition. It will no doubt be found to bear any but the most exceptionally severe winters on a wall in most of the southern or midland counties.

SAGITTARIA MONTEVIDENSIS. The beautiful and remarkably distinct flowers of this plant render it an important acquisition to our not over-numerous tender aquatics. It is a native of South America; the flowers are pure white in the ground-colour, with large dark reddish-brown spots at the base of the petals, which spots are surrounded by a yellow band. It deserves a place in every warm house where aquatic plants can be accommodated.

Rootstock tuberous. Leaves numerous; petiole two to three feet long, stout, subcylindric, tapering upwards; blade hastate, with the lobes as long as or longer than the upper portion, from narrowly oblong to deltoid, many nerved, acute or finely acuminate, basal lobes narrow and parallel or triangular and diverging. Male peduncle two to three feet high, slender; panicle a foot long, with many whorls of six to eight flowers in a whorl; bracts ovate-lanceolate, acuminate, one-third to one-half of an inch long, green; pedicels one to two inches long, decurved after flowering. Sepals half an inch long, oblong, concave, obtuse, green. Petals one to one and a half inches broad, broader than long, rounded with subcuneate base, pure white with a large maroon spot at the base bordered with yellow. Stamens numerous, surrounding a small head of abortive ovaries, filaments short papillose. Female peduncle much stouter, with much shorter pedicels and unusually broader bracts. Perianth as in the male. Ovaries in a globose green head, ovate, compressed, glabrous; style subterminal. Achenes most densely packed in a depressed globose head, almost an inch in diameter, dull green, cuneate, with an elongate-subulate style projecting laterally from the inner angle, glabrous, glandular.—*Botanical Magazine*, 6755.

THE HAYTIAN LÆLIOPS.
(LÆLIOPSIS DOMINGENSIS.)

[PLATE 107.]

THE HAYTIAN LÆLIOPS.

(LÆLIOPSIS DOMINGENSIS.)

A Handsome Hothouse Epiphyte, from ST. DOMINGO, *belonging to the Natural Order of* ORCHIDS.

Generic and Specific Character.

LÆLIOPS.—A Cattleya in all respects, except that the flowers are membranous, and the veins of the lip bearded.

THE HAYTIAN LÆLIOPS.—Pseudobulbs two-leaved. Leaves oblong, coriaceous, obtuse. Scape slender, naked, with about eight flowers at the end. Lip two-lobed, with its divisions wavy, denticulate, recurved. Central veins bearded.

Cattleya domingensis: *Lindl. Gen. & Sp. Orch.*, p. 118; Broughtonia lilacina: *Henfrey, in Gardener's Magazine of Botany*, vol. iii., p. 201, *with a figure.*

WHAT is the genus of this beautiful plant? LÆLIA? no; because it has only four pollen-masses. BROUGHTONIA? no; for although its flower is deeply cuniculate, yet it has not a long external adnate spur and decurrent sepals. EPIDENDRUM? no; for it wants the unguiculate lip more or less united to the column. CATTLEYA? still no, although we once thought it one; for the flowers are membranous, the veins of the lip bearded, and the habit quite different.

We see no means of providing a fixed station for this and a few allied plants, except by giving them a genus to themselves, the essential features of which shall consist in what has been above proposed. There is no doubt that CATTLEYA, EPIDENDRUM, and BROUGHTONIA are so very nearly related that on mere technical grounds they might be all placed in the same genus; but their habits are very different, and the mind is unable to reconcile itself to their union. As to BROUGHTONIA, if we disregard its cucullate lip and manifest external adnate spur, there is little to divide it from Epidendrum, the majority of whose species have

a cuniculate ovary, and in the case of *E. vesicatum*, even a spur partly visible; or from CATTLEYA, except the tough coriaceous quality of the lip in that genus, and the adhesion of the sepals of BROUGHTONIA to the face of its external spur. Upon grounds of the same nature as those which separate these genera must LÆLIOPSIS be sustained, when the mutual differences among the four genera may be tabulated thus:—

Labellum calcaratum, sepalis calcari adnatis.	BROUGHTONIA.
Labellum ecalcaratum, cuniculatum tantum.	
unguiculatum; ungue sæpius columnæ adnato.	EPIDENDRUM.
sessile, convolutum.	
coriaceum imberbe.	CATTLEYA.
membranaceum barbatum.	LÆLIOPSIS.

Læliopsis thus defined will receive, in addition to the species now published, *Lælia Lindenii*, *Broughtonia chinensis*, and *Epidendrum cubense*.

Læliopsis domingensis was first found on trees in St. Domingo by Mr. Mackenzie; then Jaeger gathered it off branches of the logwood tree in woods near Miragoane, where he saw it in flower in April. It has been introduced to our gardens, and exhibited by Messrs. Henderson, of Pine Apple Place Nursery, and Mr. Rucker.

It is an extremely pretty species, because of its gay lilac flowers a little veined with yellow in the middle of the lip. Like other St. Domingo plants it demands all the heat of the stove while growing; but it appears to be naturally dried up after the growth is made, if we are to judge from our wild specimens.

THE CALISAYA BARK-PLANT.
(CINCHONA CALISAYA.)

[PLATE 108.]

THE CALISAYA BARK-PLANT.

(CINCHONA CALISAYA.)

A Fragrant Hothouse Shrub, Native of BOLIVIA, *belonging to the Natural Order of* CINCHONADS.

Specific Character.

THE CALISAYA BARK-PLANT.—Leaves oblong or lanceolate-obovate, obtuse, narrower at the base, seldom sharp at both ends, smooth and shining or downy on the under side, with pits in the axils of the veins. Filaments not half so long as the anthers. Capsule ovate, scarcely so long as the flowers. Seeds finely and closely fringed with teeth at the edge.

Cinchona calisaya: *Weddell, Hist. Nat. des Quinquinas*, p. 30, tt. 3 and 4; *Journal of Hort. Soc.*, vol. vi., p. 272.

WE owe our knowledge of this important plant to one of the boldest and best of the naturalists employed by the French Government. Dr. Weddell, an English botanist attached to the mission of M. de Castlenau, succeeded, among innumerable difficulties, in reaching the country where the Calisaya, the most precious of the kinds of Cinchona, or Peruvian Barks, is produced. He brought seeds to Europe; and from some of them, obtained from the Jardin des Plantes of Paris through the friendly assistance of J. B. Pentland, Esq., the Horticultural Society raised the plant whose flowers are now represented. From the very full account of it in the Society's Journal we make as many extracts as our space will permit.

"The leaves are oblong, obtuse, pale dull green, tapering gradually into the petiole, which is red, as well as the midrib itself; at the back of the leaf, in the axil of each principal vein, is a small excavation closed up by hairs. The stipules, which fall off very

early, are a pair of oblong, erect, blunt smooth plates. The flowers appear in panicles at the ends of the lateral shoots, are of a pale pink colour before expansion, almost white when fully open, and emit a most agreeable weak balsamic fragrance. The calyx is a small superior five-toothed cup, covered with fine close down like the branches of the panicle. The corolla has a cylindrical tube about half an inch long, and a reflexed five-lobed limb, copiously fringed with long transparent club-shaped hairs. The stamens are five, and can just be seen when looking down into the tube of the corolla.

Dr. Weddell, in his Natural History of the Quinquinas, states that:—

"From this species is obtained the most precious of the Jesuit's barks used in medicine, employed from time immemorial in trade under the name of Calisaya bark, but whose origin was wholly unknown till now.

"I have already observed that this tree has hitherto been only found in Peru, in the southern part of the province of Carabaya. The results at which I have arrived in endeavouring to determine exactly the limits of the region it occupies seem curious enough to be noted in this place. Thus, after having studied the plant in all the ancient province of Yungas in La Paz, to the north of 17° S. lat., I followed it into that of Larecaja or Sorata, thence into Caupolican or Apolobamba, the place of its first discovery; and all my care has failed in enabling me to find it north of those points. An imaginary barrier exists then beyond which the plant will not go, notwithstanding that the neighbouring valleys appeared to be of the very same nature; a fact that can scarcely be explained, unless upon the supposition that peculiarities do exist in the most southern valleys of Carabaya which are wanting in the north; and this may possibly be owing to the manner in which the rivers are distributed. I believe, in fact, that I am justified in referring those of the district in question to a particular system, possibly dependent upon the Bolivian system, and that those in the other parts of the province lose themselves on the contrary by the N. of Peru, in the Upper Amazon. This unexplained attachment which certain plants manifest for natural regions, and especially for valleys, is by no means without example; and now that Geographical Botany is obtaining serious attention, science will be enriched more and more with analogous facts.

"The great reputation of the Quinquina Calisaya has caused such a demand for it, that it will certainly some day disappear completely from commerce, and we shall be obliged to be content with other sorts now despised. It has already disappeared around inhabited places, except in the form of a bush; and if by mere chance a small tree has remained unobserved in the midst of a forest, its head no sooner becomes visible than the hatchet brings it down. For my own part, when I have wished to see the species in all its vigour, it has been necessary to pass long days on foot in the forests, to penetrate them by paths which were scarcely passable, and to undergo some of the fatigues which are the ordinary lot of the poor Cascarilleros."

Its native station was found by this enterprising traveller to be on the slopes and precipices of mountains as high as 4500 or 5400 feet in the hottest valleys of Bolivia and Southern Peru, in forests between 13° and 16° 30′ S. lat., and 68°—72° W. long., in the Bolivian provinces of Enquisivi, Yungas, Larecaja, and Caupolican, and in Carabaya in Peru.

This plant has been found to require very peculiar management. Mr. George Gordon, under whose care it flowered in the Society's Garden, explains at length in the "Journal" in what way the specimen was treated which bloomed so abundantly in the Society's stove, and the reader is referred thither for information.

GLEANINGS AND ORIGINAL MEMORANDA.

ODONTOGLOSSUM CRISPUM VEITCHIANUM. In this we have a superb variety of this variable but universally favourite Odontoglot. In the immense number of plants of this species that are now annually imported, there is great difference in the size and colour of the flowers, but the appearance of one equal to the plant under notice is a rare occurrence: the flowers are large in all their parts, with the wavy crisp edges of the petals and sepals peculiar to the species. The ground-colour is white, tinted with violet, on which appear an unusual number of large reddish-brown spots evenly distributed over the surface. It is one of the finest forms of this fine Orchid that has appeared. It was shown by Baron Schrœder at the June (1884) meeting of the Royal Horticultural Society, and was awarded a First-Class Certificate.

MECONOPSIS WALLICHII, VAR. FUSCO-PURPUREA. In this we have a Himalayan species, which appears to have been raised from seed and flowered by Mr. G. Wilson in his Wisley Wood garden. It is a desirable kind with drooping flowers, in shape not unlike those of *Anemone japonica*. It is thus described by Sir J. D. Hooker.

> *M. Wallichii* was first made known by Wallich through the collectors whom he employed in the mountains of Nepal; and I collected it in the adjacent province of Sikkim in 1848, at elevations of 9,000 to 10,000 feet, whence I sent seeds home which produced, in 1852, the plant figured in this work (Tab. 4668); but whereas the flowers of the plant which I saw in Sikkim were of a dull purple colour, those of the cultivated ones were of a very pale blue, with sometimes a slight tinge of green. It is difficult, if possible, to match colours from memory, but I should say the colour of the petals in the flowering specimens which I gathered were nearer those of *M. aculeata* (Tab. 5456) than of either that of Tab. 4668 or of that now figured. With the exception of this difference of colour, I can find no character whereby to distinguish this variety from the blue-flowered one.—*Botanical Magazine*, 6760.

CŒLOGYNE DAYANA. *H. G. Reichenbach, f.* A new species of some merit from Borneo, that has appeared with Messrs. Veitch, of Chelsea, and is likely to prove a worthy associate of the other handsome kinds already known, and which from their distinct habit of growth and the lasting properties of their flowers are general favourites.

> The long narrow fusiform bulbs have stalked oblong acuminate leaves. The deciduous bracts are rhomboid, blunt. The sepals and petals are ligulate acute. The lip is broad, three lobed, the side lobes blunt, undulate, central-lobe reniform, apiculate, crenulate, transverse. The whole appears to be of the lightest ochre colour, with numerous dark-brown collateral longitudinal broad stripes on the lateral lobes, and on the same light ochre ground, a crescent-shaped half ring of dark brown opening towards the base on the middle lobe. Two plaited keels run from the base of the lip to the base of the mid lobe, where they are divided into six similar keels, covered with the most lovely partly denticulate undulations. On each side the upper part of the base runs out into a short retrorse carinate line. The slender column has an emarginate border to the androclinium on the back of the anther.—*Gardener's Chronicle*, N.S., vol. xxi., p. 826.

TULIPA ALBERTI. This new species of Tulip, from Turkestan, ranks with the best of the newly-introduced kinds. It has large bright red flowers, the beauty of which is much enhanced by the conspicuous deep brown marking on the yellow base. We understand it flowered with Mr. Elwes at Cirencester in April, 1884.

Bulb middle-sized, the outer tunics furnished with a few adpressed hairs inside. Stem about a foot long, including the peduncle, terete, finely pubescent, one-flowered. Leaves three, glaucous, glabrous, the lowest half a foot long, the two others smaller, lanceolate. Peduncle erect, four or five inches long. Perianth campanulate, bright red, two or two and a half inches long, the segments much imbricated, the three outer oblong, subacute, the three inner obovate-cuneate, all six furnished with a large faint bifid red-brown blotch on a yellow groundwork at the base. Stamens an inch long; the flattened yellow filaments glabrous at the base, longer than the purple lanceolate anthers. Ovary green, cylindrical-trigonous, shorter than the stamens; stigmas sessile, about equalling the diameter of the ovary.—*Botanical Magazine*, 6761.

233

BEGONIA MONOPTERA. *Link and Otto.* A tuberous greenhouse perennial. Flowers pure white. Native of Mexico. Belongs to Begoniads. (Fig. 263.)

This very pretty species seems to be unknown in England. It was found in Mexico by Deppe, and by him the tubers were sent in 1826 to the Botanical Garden, Berlin, where it flowered. It is described as having a simple taper reddish stem, growing two feet high and more, and covered with extremely delicate vesicles. The leaves have a long stalk, which is flat towards the top; its blade wedge-shaped, unequal-sided, three inches long and three inches broad, obliquely truncate, crenated in an irregular manner, bright green on the upper side, deep red on the under. The flowers grow in a terminal thyrse, with slightly downy flower stalks. Among the flowers are some bulbs. The ovary has one lanceolate wing, three lines long. Both males and females have five petals, which are white, with the edge rolled back. The flowers appear in July and August. It is propagated by tubers, seeds, and the small tuber-like bodies among the flowers. The latter should be placed in dry sand as soon as the stems are dead.—*Link and Otto, Icones.*

DENDROBIUM FARMERI. *Paxton. Mag. Bot.* A beautiful hothouse epiphyte, with pink and yellow flowers. Native of the East Indies. Blossoms in May.

D. Farmeri (Dendrocoryne); caulibus elongatis clavatis articulatis profunde sulcatis basi pseudobulbosis apice foliosis, foliis 2—4 ovatis coriaceis striatis, racemis lateralibus multifloris pendulis, bracteis parvis ovatis concavis, sepalis (alboflavescentibus roseo-tinctis) late ovatis obtusis, petalis conformibus (ejusdemque coloris) majoribus, labello majore (pallide flavo disco luteo) rhomboideo obtusissimo unguiculato lato supra pubescente margine denticulato.—*Hooker.*

A most delicate and lovely Dendrobium, sent in 1847 by Dr. M'Clelland, from the Calcutta Botanic Garden, to W. G. Farmer, Esq., after whom it was named. Mr. Paxton observes, that "in habit and appearance the plant very much resembles *Dendrobium densiflorum*, but the stems are more angular, and the flower-scape is less densely laden with bloom; the flowers, too, are altogether different." The flowers, however, are more different in colour than they are in shape; and if true to its other characters, there is no difficulty in distinguishing this species. In the stove of the Royal Gardens of Kew it flowers in May. Our plant has elongated club-shaped stems, jointed and deeply sulcated, growing in clusters; at the base they swell out into a kind of pseudobulb, scarcely so large as a hazel-nut. The young stems bear from two to four spreading, ovate, coriaceous or fleshy leaves at the top, acute, striated; the old stems throw out pendulous racemes from near the summit, which exceed the stems in length. Flowers numerous, but rather lax. Bracteas small, ovate, concave. Sepals very patent, broad, ovate, obtuse, pale straw-colour, delicately tinged with rose. Petals of the same colour and form, but larger, spreading. Lip moderately large, pale straw-colour, the whole disk

orange-yellow, broadly rhomboid, very obtuse, downy above, the base contracted into a claw, and above the claw the margin is on both sides folded and sinuated : the base above bears an oblong flattened tubercle. Column very short, terminated by the obtusely conical anther-case ; the lower part of the column is extended downwards, so as to form an obtuse spur to the labellum.—*Botanical Magazine*, t. 4659.

This beautiful species is very near *D. chrysotoxum*, from which it differs in its lip not being so much fringed, nor so large, and in the sepals being suffused with pink.

POSOQUERIA REVOLUTA. *Nees v. Esenbeck.* A hothouse shrub. Flowers very long, white, sweet-scented. Belongs to the order of Cinchonads. Introduced by Messrs. Veitch and Co. (Fig. 261.)

This handsome shrub was produced by Messrs. Veitch at one of the meetings of the Horticultural Society. The leaves are evergreen, ovate-oblong, rather acuminate, with a stalk about half an inch long, and the edge slightly rolled back. The flowers are five or six together, on smooth stalks about a quarter of an inch long, and furnished at the base with two extremely minute sharp scales ; they gradually taper into the ovary, which is surmounted by five sharp triangular teeth. The tube of the corolla is four inches or more long, very slender, and suddenly expands

into a five-lobed limb, the divisions of which are linear-obtuse, and not more than three-quarters of an inch long. It seems to be the same as No. 767 of the Vienna distribution of Pohl's plants.

HELIOPHILA PILOSA. *Lamarck; var.* arabidoides, *Sims.* A hardy annual, native of the Cape of Good Hope. Flowers bright blue. Belongs to the Cruciferous order. (Fig. 265.)

This little grown plant deserves to be reintroduced to cultivation, for its flowers are of the most brilliant blue, and although fugitive are so incessantly renewed, that the effect of a bed of it is nearly as good as that of a blue Lobelia. The late Mrs. Wray used to grow it charmingly, as a hardy annual, raised on her vine borders at Cheltenham. It is an annual, native of the Cape of Good Hope, whence it was long ago introduced, and then received the name of *H. arabidoides;* but De Candolle regarded it as a mere variety of *H. pilosa*, which is probable enough, for the cultivated plant varies much in the quantity of hairs that it produces; sometimes in wild specimens it is almost shaggy; at other times in cultivation it is so nearly smooth that our artist overlooked the few hairs that continue to appear. It grows about eighteen inches high, and ripens seed plentifully. The long narrow pods are uniformly dilated at the end, as if attempting to assume the necklace form observable in so many species of the genus; and the pair of short filaments is always furnished with a conspicuous dorsal tooth. Our cut has been made from specimens communicated many years ago by Mrs. Wray.

ODONTOGLOSSUM SCHILLERIANUM. *H. G. Reichenbach, f.* This species of Odontoglossum appears to have been long known to plant collectors, but up to the present time we believe it has not been flowered until it appeared with Messrs. Sander. It is somewhat like *O. luteo-purpureum,* and is thus described by Professor Reichenbach.

This is a kind of connecting link between the group of *Odontoglossum nævium* and that of *Odontoglossum luteo-purpureum.* It surpasses in extent of flowers the very best *Odontoglossum odoratum.* The sepals and petals are cuneate, oblong-acute, the lateral sepals directed downwards, quite unlike the fashion of *Odontoglossum luteo-purpureum.* The colour is yellow, with small or large brown blotches; sometimes the flowers are nearly totally brown. The lip has upright basilar laciniæ, which are much reduced, very low, and an oblong-acute undulate blade, covered with velvet, and two strong blunt calli, each with a small superior apiculus over the upper purple blotch on the disk. The base of the lip is white, the anterior part yellow. The column is slender, with a falcate one-toothed wing at each side of the proboscoid anther.—*Gardener's Chronicle,* N.S., vol. xxi., p. 577.

BEGONIA LYNCHEANA. A beautiful species of somewhat tall growth. It bears large dense panicles of bright scarlet flowers, which except in the colour are much like those of the well-known *B. nitida,* to which excellent sort the subject of our notice is a fit companion. We understand it continues to flower for several months in succession through the winter like *B. nitida,* and no doubt will be valuable for the production of cut flowers during the dull season. It comes from Mexico.

Quite glabrous, monœcious. Root-stock stout, somewhat tuberous. Stem two to three feet high, erect, branched, as thick as the little finger, pale bright green, smooth. Leaves alternate, shortly petioled, five to eight inches long, bright-green above, paler beneath. Peduncles axillary, stout, six to ten inches long. Panicle corymbiform, six to eight inches in diameter, many flowered; flowers bright scarlet, pedicels half an inch long, slender. Male flowers, most abundant, appearing first. Perianth segments two, three-quarters of an inch in diameter, rounded, concave. Stamens many, in a hemispheric cluster; filaments free, shorter than the shortly oblong obtuse anthers. Female flowers, perianth segments two to four, much smaller than in the male, concave. Ovary three to four winged; wings broad, rounded, dorsal produced very obtuse; placentas two partite, segments ovuliferous on both faces, styles three, deeply divided, with capitate stigmas.—*Botanical Magazine,* 6758.

INDEX TO VOLUME III.

[The *number* designates the page on which the description, gleaning, or original memorandum occurs. *Plate* signifies the coloured representation; *fig.* the woodcut.]

CASSELL & COMPANY, LIMITED, BELLE SAUVAGE WORKS, LONDON, E.C.

Important to Every Housekeeper

AND

To Every Marriageable Young Lady.

On forwarding your Address, and One Penny Postage Stamp (to cover postage), to GOODALL, BACKHOUSE, & CO., Leeds, you will at once have forwarded to you a beautiful little volume of 104 pages, handsomely bound in cloth, gilt lettered, and beautifully illustrated, entitled,

GOOD THINGS,

MADE, SAID, AND DONE,

For Every Home and Household.

☞ Applicants will oblige us by writing "GOOD THINGS" on outside of the envelopes, to avoid delay.

"Their goods have the merit of excellence and cheapness."
COURT CIRCULAR.

Samples and Price Lists post free.

IRISH DAMASK

Fish Napkins, 2s. 11d. per dozen. Dinner Napkins, 5s. 6d. per dozen. Table Cloths, 2 yards square, 2s. 11½d.; 2½ yards by 3 yards, 3s. 11d.; Kitchen Table Cloths, 1s. 3d. each. Real Irish Linen Sheeting, fully bleached, 2 yds. wide, 2s. 11d. per yd. Huckaback Towelling, 3½d. per yard. Surplice Linen, 11½d. per yard. Linen Dusters, 3s. 3d.; Glass Cloths, 4s. 6d. per dozen.

Fine Linens and Linen Diaper, 10d. per yard. Strong Huckaback Towels, 3s. 9d. per doz.

TABLE AND HOUSE LINEN.

ROBINSON & CLEAVER (By Appointment to the Queen & Crown Princess of Germany), BELFAST.

ETIQUETTE OF GOOD SOCIETY.

42nd THOUSAND. 1s., post free, 1s. 2d.

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London.*

JUDSON'S

"GLITTERINE"

PAINTING, &c.

ARTISTIC WORK FOR LADIES.

The Fashionable Dress Trimming.

SPECIAL!!! TO LADIES!!!

PAINTED DRESS TRIMMINGS will be much worn this Winter, especially those painted with

JUDSON'S "GLITTERINE,"

Which is a Metallic Lustre Paint, producing the most beautiful and striking effects.

Particulars, &c., POST FREE, *on application to*

DANIEL JUDSON & SON,

SOUTHWARK, LONDON.

Sold by all ARTISTS' COLOURMEN, &c. &c.

CROSBY'S

BALSAMIC

COUGH ELIXIR.

Is specially recommended by several eminent Physicians, and by DR. ROOKE, Scarborough, Author of the "Anti-Lancet."

It has been used with the most signal success for Asthma, Bronchitis, Consumption, Coughs, Influenza, Consumptive Night Sweats, Spitting of Blood, Shortness of Breath, and all Affections of the Throat and Chest.

Sold in Bottles, at 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. each, by all respectable Chemists, and wholesale by JAMES M. CROSBY, Chemist, Scarborough. [3993]

Valuable Family Medicine. Established 1835.

WHELPTON'S VEGETABLE PURIFYING PILLS

Have been extensively used by the Public, and have proved an invaluable Remedy

FOR HALF A CENTURY,

Restoring to Sound Health Thousands of Persons who in many cases had begun to despair.

WHELPTON'S PILLS were not offered to the Public until after several very striking cures had been effected by them, and which so surprised all who knew the persons so cured, that numerous applications were made for these Pills both personally and by letter. So satisfactory were their results in allaying various disorders, that in a short space of time they became very generally adopted, and are now universally esteemed as a great boon.

Recommended for disorders of the HEAD, CHEST, BOWELS, LIVER, and KIDNEYS; also in RHEUMATISM, ULCERS, SORES, and all SKIN DISEASES.—In Boxes, price **7½d., 1s. 1½d.,** and **2s. 9d.,** by G. WHELPTON & SON, 3, Crane Court, Fleet Street, London, and sent free on receipt of 8, 14, or 33 Stamps. Sold by all Chemists.

USE THE ORIGINAL & ONLY GENUINE

WRIGHT'S COAL TAR SOAP

AN ELEGANT TOILET SOAP

TABLETS 6½d. BOXES 1/6

PRESCRIBED BY THE ENTIRE MEDICAL PROFESSION FOR THE CURE OF SKIN DISEASES.

Protects from MEASLES, SMALL-POX, and SCARLET FEVER.

W. V. WRIGHT & Co. Southwark, London.

EVERY LADY SHOULD USE "The HOUSEHOLD TREASURE"

BORAX

PREPARED CALIFORNIAN BORAX

"Queen of Antiseptics."

SPECIALITE FOR TOILET, LAUNDRY, COOKING, LARDER, CUTEHOUSE, & SANITARY PURPOSES.

Sold by Grocers and Oilmen everywhere, in 1d., 2d., and 6d. packets—full directions with each.

Its Discovery, Uses, Recipes, with Packet free, Two Stamps.

PATENT BORAX COMPANY, BIRMINGHAM.

EVERYBODY SHOULD HAVE

Dr. ROOKE'S

"What the Prince of Wales says"

HANDY GUIDE TO HEALTH AND HEALTH RESTORING PLACES

"FULL OF BEAUTIFUL ENGRAVINGS AND USEFUL INFORMATION."

May be had of all Patent Medicine Vendors, Booksellers, and News Agents, and will be sent post free on receipt of a penny stamp by Dr. ROOKE, Scarborough, England.